DOCUMENT RESUME

ED 378 072 SO 024 102

TITLE	Uganda: Social Sectors. A World Bank Country Study.
INSTITUTION	World Bank, Washington, D. C.
REPORT NO	ISBN-0-8213-2713-5; ISSN-0253-2123
PUB DATE	93
NOTE	237p.; Appendixes contain small and filled print.
AVAILABLE FROM	Distribution Unit, Office of the Publisher, Dept. F, World Bank, 1818 H Street, N.W., Washington, DC 20433.
PUB TYPE	Reports - Research/Technical (143)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Demography; *Educational Policy; Elementary Secondary Education; Foreign Countries; Higher Education; *Human Geography; Public Health; Social Change; Social Science Research; *Social Services
IDENTIFIERS	*Uganda

ABSTRACT

The objective of this report was to assist the Ugandan government in considering how its intended improvement in social services can be achieved over the decade of the 1990s. Part 1 provides the necessary background. Chapter 1 illustrates in which areas, and to what extent, Uganda is in a social deficit situation in comparison with other African and low income countries. Chapter 2 illustrates the impact of alternative population growth scenarios on the need for social services, as well as other consequences of population growth. Chapters 1 and 2 deal with the demand side. Chapter 3 discusses supply side constraints to governmental provision of social services, as well as prospects for the alleviation of these constraints, and points out that private expenditures and private providers play a substantial role in the social sectors in Uganda. In part 2, chapters 4, 5, and 6 analyze current service delivery and recommended future strategy in the areas of education, health, and population/family planning, respectively. Finally, Chapter 7 in part 3 consolidates the recommended shifts in private and government spending on the social sectors. The section on the education sector explores: (1) primary education; (2) secondary education; (3) university education; (4) financing and management of the sector as a whole; (5) policy framework for the education sector; (6) universal primary education with its costs and prospects; and (7) investment program, expenditure plan, and major donor activities. The paper reports that although primary and secondary education have expanded rapidly, 40 percent of teachers at the primary level, and 35 percent of those at the secondary level are untrained. (DK)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 378 072

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

J. FEATHER

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SO 024 102

BEST COPY AVAILABLE

A WORLD BANK COUNTRY STUDY

Uganda

Social Sectors

The World Bank
Washington, D.C.

Copyright © 1993
The International Bank for Reconstruction
and Development/THE WORLD BANK
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

All rights reserved
Manufactured in the United States of America
First printing December 1993

World Bank Country Studies are among the many reports originally prepared for internal use as part of the continuing analysis by the Bank of the economic and related conditions of its developing member countries and of its dialogues with the governments. Some of the reports are published in this series with the least possible delay for the use of governments and the academic, business and financial, and development communities. The typescript of this paper therefore has not been prepared in accordance with the procedures appropriate to formal printed texts, and the World Bank accepts no responsibility for errors. Some sources cited in this paper may be informal documents that are not readily available.

The World Bank does not guarantee the accuracy of the data included in this publication and accepts no responsibility whatsoever for any consequence of their use. Any maps that accompany the text have been prepared solely for the convenience of readers; the designations and presentation of material in them do not imply the expression of any opinion whatsoever on the part of the World Bank, its affiliates, or its Board or member countries concerning the legal status of any country, territory, city, or area or of the authorities thereof or concerning the delimitation of its boundaries or its national affiliation.

The material in this publication is copyrighted. Requests for permission to reproduce portions of it should be sent to the Office of the Publisher at the address shown in the copyright notice above. The World Bank encourages dissemination of its work and will normally give permission promptly and, when the reproduction is for noncommercial purposes, without asking a fee. Permission to copy portions for classroom use is granted through the Copyright Clearance Center, Inc., Suite 910, 222 Rosewood Drive, Danvers, Massachusetts 01923, U.S.A.

The complete backlist of publications from the World Bank is shown in the annual *Index of Publications*, which contains an alphabetical title list (with full ordering information) and indexes of subjects, authors, and countries and regions. The latest edition is available free of charge from the Distribution Unit, Office of the Publisher, The World Bank, 1818 H Street, N.W., Washington, D.C. 20433, U.S.A., or from Publications, The World Bank, 66, avenue d'Iéna, 75116 Paris, France.

ISSN: 0253-2123

Library of Congress Cataloging-in-Publication Data

Uganda : social sectors.
p. cm. — (A World Bank country study, ISSN 0253-2123)
Includes bibliographical references.
ISBN 0-8213-2713-5
1. Uganda—Social policy. 2. Social indicators—Uganda. 3. Human services—Uganda. I. International Bank for Reconstruction and Development. II. Series.
HN794.A8U38 1993
361'.096761—dc20 93-43863
CIP

CONTENTS

		Page
Preface		vii
Acknowledgements		viii
Main Findings		ix
Executive Summary		xiii
Part One: Background		
I.	**Uganda's Social Indicators in Comparative Perspective**	1
	A. Demographic and Health Indicators	1
	B. Children's Health and Nutrition	3
	C. Education Indicators	5
	D. Inter-regional Variations in Social Indicators	6
	E. Assessment and Implications	7
II.	**Demographic Prospects, and Consequences of High Fertility and Rapid Population Growth**	9
	A. Major Demographic Variables, and Alternative Scenarios	9
	B. Justifications for Fertility Regulation	13
	C. Implications of Rapid Population Growth	14
	D. Government Policy	18
	E. Conclusions	18
III.	**Contextual Factors Influencing the Design of Social Sector Strategy**	20
	A. Low Income and Lack of Domestic Savings	20
	B. Central Government Finance	20
	C. Planning and Budgeting of Central Government Expenditure	24
	D. Civil Service Reform	26
	E. Decentralization	28
	F. Relative Roles of Private and Governmental Expenditures and Providers in the Education and Health Sectors	28
Part Two: Delivery of Social Services		
IV.	**The Education Sector**	31
	A. Primary Education	31
	B. Secondary Education	36
	C. University Education	38
	D. Financing and Management of the Sector as a Whole	40
	E. Policy Framework for the Education Sector	42
	F. Universal Primary Education: Costs and Prospects	47
	G. Investment Program, Expenditure Plan, and Major Donor Activities	50

V. The Health Sector 52
A. Health Conditions 52
B. Health Care System 53
C. Health Expenditures and Financing 61
D. Policy Framework for the Health Sector 69
Annex: The Major Causes of Morbidity and Mortality in Uganda 71

VI. Family Planning 73
A. Knowledge, Attitudes, and Practice of Family Planning 73
B. Family Planning Services 76
C. Information, Education, and Communication 80
D. Donor Support for Family Planning Activities 81
E. The Possible Costs of Family Planning 82
F. Assessment and Future Directions 83

Part Three: Conclusion

VII. Conclusion: Toward An Increased and Better Allocated Social Sector Effort 85

Annexes

Annex A: Technical Annex on Demographic Data and Projections

Annex B: Population Pressure on the Land

Annex C: Female Participation in Education

Annex D: Selected Figures from Demographic and Health Surveys (DHS) Comparative Studies

Annex E: Selected Pages from the 1992 Integrated Survey Questionnaire and the 1992 Community Survey Questionnaire

Annex F: Bibliography

Annex G: Questionnaire - Statistical Return for Primary Schools, 1990

Statistical Appendix

List of Statistical Appendix Tables
Fiscal Data
Education Sector Data
Health Sector Data

LIST OF TEXT TABLES AND TEXT FIGURES

TEXT TABLES

		Page No.
Chapter I. Uganda's Social Indicators in Comparative Perspective		
I.1	Demographic Indicators	2
I.2	Infant Mortality Rates	3
I.3	Enrollment Ratios	5
I.4	Inter-regional Variations in Social Indicators	7
Chapter II. Demographic Prospects, and Consequences of Population Growth		
II.1	Impact of AIDS on Demographic Measures	10
II.2	Alternative Fertility and Population Scenarios	12
II.3	Projected Numbers of MCH Clients and School-age Children	15
II.4	Employment, Unemployment, and Labor Force, 1990	16
Chapter III. Contextual Factors Influencing the Design of Social Sector Strategy		
III.1	Central Government Budgetary Operations	21
III.2	Sectoral Distribution of Central Government Expenditure	22
III.3	Resource Envelope for Future Social Sector Spending	23
III.4	Wage and Salary Projection, 1991/92	27
III.5	Private and Government Expenditures in the Education and Health Sectors, 1989/90	29
Chapter IV. The Education Sector		
IV.1	Primary Enrollment and Enrollment Ratio, by Gender and Grade	32
IV.2	Financing of Primary Education	36
IV.3	Central Government Expenditure in the Education Sector	39
IV.4	Central Government Recurrent Expenditure per Student, by Level	40
IV.5	Unit Costs of Primary Education to the Government	48
IV.6	Relationship between Fertility and Achievement of Universal Primary Education	49
IV.7	Private and Government Expenditures in the Education Sector, Actual and Projected	51
Chapter V. The Health Sector		
V.1	Causes of Death in Twenty Reporting Hospitals, 1990	52
V.2	Health Units and Capacity, by Provider	53
V.3	Health Care Personnel, 1991	56
V.4	Utilization Data for Selected Government and NGO Hospitals, 1990	58
V.5	Estimates of Relative Productivity of Government and NGO Staff, 1990	58
V.6	Population-based Data on Choice of Provider	60
V.7	Framework for Classifying Health Sector Interventions	61
V.8	Program Budget Classifications	62
V.9	Central Government Expenditure in the Health Sector	64
V.10	Summary of Alternative Approaches to Controlling Health Problems	66
V.11	Estimated Cost Recovery in NGO Hospitals	68

Chapter VI. Family Planning

VI.1 Satisfaction of Demand for Contraception, Uganda and Other DHS Countries 74

Chapter VII. Conclusions

VII.1 Private and Government Expenditures in the Education and Health Sectors, Actual 1989/90 and Projected 1994/95 86

TEXT FIGURES

Chapter V. The Health Sector

V.1 Expenditure on Health from All Sources, 1989/90 63
V.2 Amount and Distribution of Local and Donor Spending 65
V.3 Spending on Disease Problems, by Expenditure Category 67

Chapter VI. Population and Family Planning Program

VI.1 Relationship between Contraceptive Prevalence and TFR, Uganda and Other DHS Countries 75

PREFACE

1. When the National Resistance Movement (NRM) Government came to power in 1986, it inherited a country shattered by years of misrule, instability, insecurity, and civil war. Uganda's once impressive economic and social infrastructure lay devastated by war and lack of maintenance. Skilled personnel had fled the country. Agricultural production had fallen considerably, and industrial enterprises lay abandoned. Severe macroeconomic imbalances fueled inflation, and external payments arrears were large and growing.

2. In the period since then, the Government has made considerable progress toward stabilizing the economy, restoring essential infrastructure such as trunk roads, and reviving the agricultural sector. In view of the progress that has been achieved in these areas, the Government is now devoting greater attention to addressing medium to-long term issues, as outlined in its structural adjustment program.

3. Within this context, one of the issues which the Government intends to address is improving access to social services. For example, in his Budget Speech of July 1991, the Minister of Finance declared that "improving basic social services represents a pressing area for Government action in the next phase of the reform agenda." This is an important dimension of poverty alleviation in Uganda. The objective of this report is to assist the Government in considering how the intended improvement in social services can be achieved over the decade of the 1990s.

4. Part One provides the necessary background. In order to give some sense of need, Chapter I illustrates in which areas, and to what extent, Uganda is in a "social deficit" situation in comparison with other African and low-income countries. Needs, of course, are not static; as the population grows, the demand for social services increases. Chapter II illustrates the impact of alternative population growth scenarios on the need for social services, as well as other consequences of population growth. Whereas Chapters I and II deal with the "demand" side, Chapter III discusses "supply-side" constraints to Governmental provision of social services, as well as prospects for the alleviation of these constraints, and points out that private expenditures and private providers play a substantial role in the social sectors in Uganda. In Part Two, Chapters IV, V, and VI analyze current service delivery and recommended future strategy in the areas of education, health, and population/family planning, respectively. Finally, Chapter VII in Part Three consolidates the recommended shifts in private and Government spending on the social sectors.

5. About the same time this report was being prepared, the Ministry of Finance and Planning, with technical and financial support from UNICEF, was engaged in preparing the first Uganda National Program of Action for Children (September 1992). UNPAC discusses and sets goals for child and maternal health and nutrition, basic education, water and sanitation, and child protection. As set out in the introductory chapter, UNPAC "does not aim to replace any of these existing sectoral plans but rather seeks to unite and supplement them." Its treatment of education policy and health policy is therefore consistent with the White Paper on Education and the Three-Year Health Plan, which are discussed in the Bank's Social Sector Strategy report. The intention is to update and roll over UNPAC from time to time.

ACKNOWLEDGEMENTS

This report was prepared by a mission that visited Uganda in November/December 1991. The mission consisted of Bruce Jones (chief), Paul Shaw and Althea Hill (World Bank staff), and Charles Griffin, Alba D'Souza, Dr. Alex Zinanga, and Yang-ro Yoon (consultants). Eduard Bos prepared the demographic projections. A draft of this report was discussed with the Government in October 1992.

MAIN FINDINGS

Uganda's total fertility rate (TFR) of 7.3 is almost twice the average among low-income countries generally. The desired total fertility rate (DTFR) has been estimated at 6.5. This high rate is unsurprising in view of the low level of female education, which is the strongest correlate of interest in fertility limitation. The crude death rate of 20 per 1000, which has been elevated by the AIDS epidemic, is also about twice the average among low-income countries. The infant mortality rate is 70% higher than the average among this group. The primary school enrollment ratio is 71% overall, and only 63% for girls. These poor social indicators are a reflection both of a low level of human welfare and constraints which Uganda must alleviate, by "investing in people," in order to achieve sustained, long-term growth. When the interrelation-ships among the social indicators are taken into account, it is apparent that the effectiveness of efforts to address "deficits" in individual social sectors - education, health, and family planning - will be enhanced if they are supported by complementary efforts to address related sectors as well.

Needs, of course, are not static; as the population grows, demand for social services increases. The population growth rate is estimated to be 3.1% for 1990-95. By 2010-15, the population growth rate could be as high as 3.8%, or as low as 2.4%, depending on the success of AIDS control efforts, and the evolution of fertility. Thus, Uganda's population will grow rapidly in any event, but less rapidly under the declining fertility scenario. There are four important justifications at the family/household level for fertility regulation: (a) maternal and child health; (b) enabling Ugandan women to exercise reproductive choice; (c) poverty alleviation at the family/household level; and (d) assisting HIV-positive people not to have additional children. At the macro level, the high dependency ratio impedes saving. Rapid population growth makes it more difficult to reduce exising deficits in social service provision and contributes to stress on the environment.

In view of Uganda's low income and low domestic resource mobilization performance, the resources available to meet these urgent social challenges are quite limited. The tax revenue effort has been unusually low; this has constrained Government expenditure/GDP ratio to a low level, and caused the Government's budget to be highly dependent on external aid. Although Government social sector spending has been on an increasing trend, reaching 3.9% of GDP in the 1992/93 budget (education, 2.4% of GDP; health, 1.5% of GDP) it remains well below comparators, especially for education. Over the medium term, it would be reasonable to aim at increasing Government social sector spending to about 4.5% of GDP for education and 2.0% of GDP for health. Private expenditures outweigh Government expenditures in both sectors.

As set out in the policy statement entitled "The Way Forward II" (1992), the Government's strategy is to concentrate Government expenditure on those activities in which Government must play a leading role, taking into account the comparative advantages of the public and private sectors, while ensuring that expenditures within priority sectors are cost-effective. The expenditure strategy will also need to reflect the Decentralization program, under which many responsibilities will be devolved to the district administrations.

In the education sector, the great majority of Ugandan children enter primary school, but by P7 the gross enrollment ratios are only 49% for boys and 29% for girls. The explanation most commonly put forward for the high dropout rates is fees. Poor learning conditions in the schools and the contribution of older children, especially girls, to household labor, are other relevant factors. About 40% of primary teachers nationwide are untrained, and in some districts a majority of the teachers are untrained. Although Central Government financing of primary education has recently been on an increasing trend, parental contributions amount to 65-90% of the total funding of primary schools, contributing to variations among households in enrollment and wide variations among schools in the quality of education.

Secondary enrollment ratios are low (13% overall, 7% for girls), and secondary schools rely on parental financing for 25-90% of costs, again generating wide variations in quality. At the two public universities, students are charged neither for tuition nor for accommodation and boarding costs, which are carried on the Government's budget. In the 1991/92 budget, the ratio of Central Government spending per student among university, secondary, and primary students was 157:3:1.

These issues have been well recognized in the White Paper on Education, which was issued in 1992 for public discussion, prior to eventual adoption. The White Paper recommends progressive abolition of tuition fees at the primary level, phasing out of boarding subsidies at the tertiary level, and strengthening of teacher training. The basic thrust of the Government's strategy has been characterized as emphasis on primary education, to be financed by a relative shift of resources, particularly non-instructional subsidies, away from the secondary and tertiary levels. This strategy is entirely appropriate in view of the well-established linkages between primary education and development, in terms of both economic returns (earnings), and social returns such as lower fertility and improved child survival. The relevant question then becomes the magnitude of the necessary shifts. It would be appropriate to increase Central Government expenditure on primary education to about 3.5% of GDP. It will certainly be necessary to mobilize additional resources for secondary and higher education, but these would have to be mobilized from beneficiaries.

The White Paper also advocates, partly on attitudinal grounds, vocationalization of education throughout the primary and secondary cycles. The strategy for facilitating the acquisition of practical skills by young people should, however, draw upon the experience of other countries. This experience has contributed to a trend toward "clear structural separation of training from general education."

Health statistics reveal that the leading causes of death are AIDS, tuberculosis, and malaria, for adults, and malaria, pneumonia, and diarrhea, for children. The leading causes of illness and death are all preventable, although with varying degrees of difficulty.

The public sector accounts for about 60% of the clinical facilities in the country, with the balance in the nongovernmental (NGO) sector. Health facilities are adequately distributed, except in the north, where there is less access. The Government health care system is organized into three principal tiers: Mulago Hospital in Kampala; a district hospital in each district; and lower-level facilities in each district. The upper tiers are administered by the Ministry of Health, while district administrations are responsible for the lower-level facilities. Under the Decentralization program, it has been decided that the district hospitals will become part of the district health administration headed the by the District Medical Officer, who will report to the District Executive Secretary.

Data reveal that although the NGO sector accounts for 38% of hospital beds, it provides a majority of the bed-days, due to greater staff productivity and capacity utilization. A population-based survey found that 40% of care-seekers used Government services, while 60% visited private for-profit or NGO clinics.

Analysis of Government expenditure in the health sector reveals that it is skewed toward curative services, with preventive and public health measures absorbing a relatively small share of the budget. When private health spending is added, it is estimated that about three-fourths of total health is devoted to curative care, despite the fact that most of this curative spending could be avoided through public action.

Concerning cost recovery, most NGO facilities recover their recurrent costs. In the government sector, government hospitals have recently been allowed to establish private wings which charge full cost. At the local level, many health units, with the approval of their management committees, have begun to charge fees. However, thus far, recognized user charges have played only a minor role in the financing of government health services.

The health sector issues are well reflected in the Three Year Health Plan (December 1992). The plan recommends: (a) rehabilitation rather than expansion of Government clinical services; (b) reallocating resources toward preventive and promotive services; (c) collection of significant amounts from user charges in Government health facilities; and (d) avoiding duplication with NGO efforts, including consideration of selective financing of NGOs for agreed purposes. These policy directions are excellent. In order to move toward effective action, the Government will need to attend to the following issues: mobilization of resources for greater health spending; measurement of reallocation toward more cost-effective services; addressing the institutional requirements of Decentralization in the health sector; and strategies for addressing particular health problems.

One of the most important health programs should be family planning. The Uganda Demographic and Health Survey (UDHS) 1988/89 found that 70% of Ugandan women had a favorable attitude toward family planning, but respondents reported that only a minority of husbands approved of family planning. Current demand among married women for contraception was estimated at 32%; however, contraceptive prevalence was very low, at only 5%. Clearly, there is an enormous gap between generally favorable attitudes and demand (at least among women), and very limited practice of family planning. Among eleven DHS countries for which service availability data were collected, Ugandan women were found to have the least access.

UDHS found that the distribution of service provision was: public sector, 42%; NGO, 33%; private for-profit (doctors, pharmacies), 20%. Only a small minority of Government health facilities offer family planning services. There is a bias in favor of urban facilities. Clinic-based methods are not widely available. Surgical contraception is now offered at 15 locations. Social marketing has recently been introduced.

Uganda can learn from the experience of other countries, which has demonstrated that, although contraception has spread because of voluntary actions by couples, their decisions and actions have been facilitated by organized national family planning programs. There is a need to establish a focal point for the formulation of objectives for a national family planning program and monitoring of progress toward their achievement. Service delivery approaches should be a mixture of clinics and social marketing for the urban population and outreach services (community-based distribution, mobile clinics) for the rural population. Surgical contraception should be made available in all regions of the country, and new methods such as implants should be introduced. There is a need to develop IEC strategies aimed at specific target groups. Finally, there is a need for research and evaluation on attitudes which do not favor family planning use and on the effectiveness of service delivery approaches.

In sum, in order for Uganda's presently low social indicators to be improved, it will be necessary for social sector spending to be both increased and better allocated. The essential policies are the expansion of access to primary education of adequate quality, to be achieved by restructuring the pattern of Government expenditure and cost recovery in the education sector; reorientation of the Government effort in the health sector toward public health and other preventive services; and making effective family planning services widely available.

EXECUTIVE SUMMARY

UGANDA'S SOCIAL INDICATORS IN COMPARATIVE PERSPECTIVE

Uganda's total fertility rate (TFR) of 7.3 is the fourth highest among the 120 countries included in the World Bank's database, and is almost twice the average of 3.8 in low-income countries generally. Among 25 developing countries in which a Demographic and Health Survey was carried out in the late 1980s, Uganda is the only country for which no evidence of fertility decline was found. The desired total fertility rate (DTFR) has been estimated at 6.5. This high rate is unsurprising in view of the low level of female education (only 19% of women having completed primary school), which is the strongest correlate of interest in fertility limitation. These data do indicate, however, that about 11% of fertility is unwanted.

The crude death rate of 20 per 1000 is about twice the average among low income countries generally. Reflecting the high death rate, including the impact of AIDS, life expectancy at birth is projected to fall to only 42.7 years during 1990-95, which would be lower than 1990 estimates for all other countries in the World Bank's database.

Among children's health and nutrition indicators, the infant mortality rate probably fell by about 15% between 1965 and 1985, but is estimated to have since risen, reflecting the impact of neonatal AIDS, back to the 1965 level. Because infant mortality has displayed a substantial long-term decline in most countries, but not in Uganda, Uganda's infant mortality rate is currently estimated to be 70% above the average for low-income countries. The Uganda Demographic and Health Survey in 1988/89 found that 45% of surveyed children displayed abnormally low height-for-age, or "stunting", arising from chronic undernutrition. These anthropometric measurements may reflect inadequate food intake arising from household food insecurity, inability of the body to effectively utilize food because of infection, or both.

The primary school enrollment ratio is 71% overall, and only 63% for girls. The secondary enrollment ratio is only 13% overall, and only 7% for girls.

Inter-regional variations in social indicators are not very striking. On the under-5 mortality measure, Uganda's best region ranks below Kenya's worst province. On the stunting dimension, Uganda's best region ranks below all except three of Kenya's districts. In sum, Uganda's social indicators are deplorably low. They are low throughout the country. The health indicators, in particular, are among the world's worst.

These poor social indicators are both a reflection of a low level of human welfare, and a reflection of constraints which Uganda must alleviate, by "investing in people", in order to achieve sustained, long-term growth.

When considering its social sector strategies, it will be important for the Government to keep in mind the interrelationships among the social indicators. Female education is negatively correlated with fertility, infant mortality, and child malnutrition. The high level of fertility, and the short childspacing intervals inevitably associated with it, has adverse implications for mothers' and children's health. Fertility has an adverse impact on female education when teenage pregnancies result in school dropout, or when girls may stay home from school to care for younger siblings. Over the medium term, high fertility causes the number of school-age children to grow more rapidly, exacerbating educational access and

quality problems. The high level of infant and child mortality may encourage couples to have more children born than they ultimately want, in order to achieve the desired number of surviving children. The high level of adult mortality may make it difficult for survivors to keep children in school. When these interrelationships are taken into account, it is apparent that the effectiveness of efforts to address "deficits" in individual social sectors - education, health, and family planning - will be enhanced if they are supported by complementary efforts to address related sectors as well.

DEMOGRAPHIC PROSPECTS, AND CONSEQUENCES OF HIGH FERTILITY, AND RAPID POPULATION GROWTH

This report examines Uganda's demographic prospects on the basis of alternative assumptions about two key parameters: AIDS mortality, and fertility.

The implications for Uganda's demographic indicators of three AIDS mortality scenarios - without AIDS, uncontrolled AIDS, and AIDS control interventions - are explored. The "without AIDS" scenario is a counterfactual which provides a benchmark against which impact of AIDS can be assessed. Because of the long latency period, even if effective AIDS control practices were adopted today, AIDS mortality will continue to rise for the remainder of this decade. During 1995-2000, by increasing the crude death rate by about 6 per 1000, AIDS will reduce the population growth rate by a margin of about 0.6%. Thus, if fertility remains constant, during 1995-2000 AIDS will lower the population growth rate from the 3.7% it would have been without AIDS, to 3.1%. The "uncontrolled AIDS" and "AIDS intervention" scenarios begin to differ significantly, in terms of their demographic impact, only after the year 2000. Because of the losses among adults which diminish Uganda's already overstretched childrearing capacity, the AIDS epidemic augments the case for fertility reduction.

If fertility remains constant at 7.3 while the Government's efforts to control AIDS are successful, then the population growth rate will accelerate from the current 3.1% annually, to 3.8% annually during 2010-2015. The dependency ratio would remain extremely high at 113%, and the population would increase by 132% by 2015. On the other hand, if effective family planning services were to be made widely available to Ugandan women, then fertility could decline. Under the declining fertility scenario, the population growth rate would decelerate to 2.4%, the dependency ratio would fall to 81%, and the population would increase by 92% by 2015. Thus, Uganda's population will grow rapidly in any event, but less rapidly under the declining fertility scenario.

There are a number of justifications for fertility regulation in Uganda. In particular, there are four important justifications at the family/household level: (a) maternal and child health; (b) enabling Ugandan women to exercise reproductive choice; (c) poverty alleviation at the family/household level; and (d) the need to assist HIV-positive people not to have additional children.

At the macro level, the high fertility and dependency ratios make it more difficult for the savings rate to be increased from negative to positive. Rapid population growth makes it more difficult to reduce existing deficits in MCH services and education over the medium-to-long term. It is exacerbating stress on Uganda's environment, as manifested by the depletion of forest resources.

Prospects for absorbing the growth of the labor force must be related to the prospects for growth in the major sectors. In the industrial sector, recent growth has largely represented restoration of greater capacity utilization. In order to sustain industrial sector growth, new investment will be needed. This will depend on a major improvement in Uganda's savings rate - a challenge which would be eased by fertility reduction. In the agricultural sector, there is some underutilized land, but there are also areas of the country where population has become dense, leading to an increased concentration of very small farms which are not promising for absorbing additional labor. There are constraints to migration: ethnicity; human and animal health problems such as malaria and tse-tse; lack of infrastructure such as roads and water supply in new areas. Overcoming the constraints to the absorption of additional population on the land, without impoverishment, will be possible, but not easy. This is a process which will take time, and will require savings and investment. It is therefore a process which would be facilitated by lower fertility and slower population growth.

For all of the above reasons, the formulation and implementation of an effective national family planning program is an urgent priority.

CONTEXTUAL FACTORS INFLUENCING THE DESIGN OF SOCIAL SECTOR STRATEGY

The Government's capacity to deliver social services is affected by constraints, such as the low revenue effort, the lack of an adequate system for prioritizing Government expenditure, and the lack of a "living wage" for Government employees. It is helpful to have an appreciation of these constraints, and the prospects for alleviating them, when considering how rapidly can Government-provided social services be expanded, and what roles can and should be left to the private sector.

Low income and lack of domestic savings are important constraints. Uganda, which twenty years ago was one of the most prosperous African countries, today lies toward the poorer end of the low-income group. Even with 5% annual growth from this point forward, Uganda will not return to the real income per capita levels of twenty years ago until well into the twenty-first century. Related to the low incomes, and the high fertility and mortality rates which make it difficult for families to save, Uganda is one of the few countries in the world for which a negative savings rate has been estimated. The implications of the low income and lack of domestic savings are that social sector spending should be centered on the most cost-effective interventions, and that there should be significant cost recovery in selected areas.

Concerning Central Government finance, the World Bank's 1991 Public Expenditure Review pointed out that Uganda's revenue/GDP effort was unusually low, and that this constrained the Government expenditure/GDP ratio to a low level, and caused the Government's budget to be highly dependent on external aid. Since then, the revenue yield has remained low, and the higher level of Government expenditure has been aid-financed. The Government's medium-term fiscal objectives are to substantially increase the revenue effort, devote a greater share of Government expenditure to economic and social services, and release (through deficit reduction) more resources to the banking system for use by the private sector.

In the past, in comparison with other countries the distribution of Central Government expenditure has skewed toward defense, contributing to a distinctly low level of Government spending on social sectors, particularly education. Defense expenditure has recently been on a declining trend. Although Government social sector spending has been on an increasing trend, reaching 3.9% of GDP in the 1992/93 budget, it remains well below comparators, especially for education. Over the medium term, it would be reasonable aim at increasing Government social sector spending to about 4.5% of GDP for education and 2% of GDP for health, 4.5% of GDP for education and 2.5% of GDP for health.

As set out in The Way Forward II, the Government's expenditure strategy is to concentrate Government expenditure on those activities in which Government must play a leading role, taking into account the comparative advantages of the public and private sectors, while ensuring that expenditures within priority sectors are cost-effective.

In recent years, reports of both the Government and the World Bank have pointed out weaknesses in the existing arrangements for planning and budgeting of Government expenditure. In particular, the distribution of expenditure among sectors was not systematically analyzed; total Government expenditures on programs within sectors were not readily identifiable; objectives for Government expenditure were not specified; there was a lack of a medium-term framework for resource allocation. These general weaknesses are fully apparent in both the education and health sectors. In order to address these problems, the Government intends to implement a budget reform program, including eventual preparation of a Medium Term Expenditure Plan (MTEP), with assistance from IDA under the recently negotiated Economic and Financial Management Project. Budget reform will be piloted in five key ministries, including the Ministry of Education and the Ministry of Health.

In recent years, several Government reports, including ones dealing specifically with the education and health sectors, have identified grossly inadequate official compensation as a factor leading to absenteeism and other abuses. In 1991/92 the Government wage and salary bill is only 1.6% of GDP, far below other low-income African countries. Since education and health are both "labor-intensive" sectors, compensation which enables teachers and health workers to devote an appropriate amount of time on job is a critical factor in the delivery of the service. As part of its structural adjustment program, the Government has begun to implement a program of Civil Service reform. Specifically, the Government has committed itself to identify a minimum wage, formulate a projection of the funds available for salary enhancement over the next three years, and develop a proposal for monetization of benefits.

The Government budget is not the only source of expenditure on social services. In Uganda recently, private expenditures have outweighed Government expenditures in both education and health. The predominant share of private expenditure on health services is a natural reflection of the manner in which most health services are produced and consumed, and is consistent with the pattern of other countries. The predominant share of private expenditure in the education sector, on the other hand, is untypical, and represents an equity problem. The issue of private and Government providers is related to the issue of private and Government expenditures, but these two issues are not identical, since private payments may be made to Governmental providers, and conversely. The existence of a social need does not necessarily mean that the Government should provide for that need, because there are some social services that the private sector can provide at least as efficiently as the Government. Thus, the Government's social sector strategies should explicitly consider the current and potential roles of private expenditures and providers.

THE EDUCATION SECTOR

The Education System and its Financing

Primary education has expanded rapidly over the past decade. The great majority of Ugandan children enter primary school, but by P7 the gross enrollment ratios are only 49% for boys, and 29% for girls. There has been no empirical study of why children are out of school; the Integrated Survey being carried out this year explores this question. The explanation most commonly put forward is fees. The poor learning conditions in the schools are undoubtedly another factor discouraging school attendance. It is anecdotally reported that rural households, especially poor ones, value the time that daughters can devote to out-of school-of-school tasks, including care of younger siblings in large families, and that this contributes to the high girls' dropout rate.

Almost 40% of primary teachers are untrained, and in some districts a majority of the teachers are untrained. The Teacher Training Colleges (TTCs) lack textbooks and training materials, and the staff are de facto all part time. There is an acute shortage of textbooks in the primary schools, while other instructional materials are non-existent. Only 42% of classes are in "permanent structures".

Although Central Government financing of primary education has been on an increasing trend the past three years, it remains far below levels found in other African countries. Primary education would collapse in the absence of parental contributions, which amount to 65-90% of the total funding of primary schools. There are two types of parental contributions: "tuition" which is set by the Government, and Parent-Teacher Association (PTA) fees which are determined by the headmaster and the School Management Committee. PTA fees range from 5000 shillings to 50,000 shillings per term. According to the Ministry of Education, the consequence of shifting the burden of financing primary education largely from Government to parents has been "the lower income group either not enrolling, or withdrawing children from school when the financial burden becomes too great." In addition to causing variations among households in enrollment, the financing system has contributed to wide variations among schools in the quality of education provided.

Secondary education has expanded even more rapidly than primary. Eighty percent of Government-aided secondary schools were founded during the 1980s, many located in primary school structures. About 35% of secondary teachers are untrained. Secondary teacher training institutions are underprovided. Many secondary teachers are only part-time. There have been no major investments in secondary school facilities since the completion of the First IDA project in the early 1970s. As in the case of primary education, Government financing must be substantially supplemented by parents through PTA, generating wide variations in quality.

For many decades, university education in Uganda meant Makerere University. Recently, one additional public university and two private universities have been organized, but in 1991 Makerere still accounted for 98% of public university enrollment, and 95% of total university enrollment. At the present time, Makerere students are charged neither for tuition, nor for accommodation and boarding costs, which are carried on the University's budget. Thus, the University is completely dependent on Government budgetary funding, which is seriously inadequate. Following the restoration of peace in the country in 1986, a number of donors have initiated assistance to particular facilities at Makerere; these targeted investments have produced uneven development of the University's infrastructure, and have

taken place in the absence of any long-term academic, physical, or financial planning for the University as a whole.

Data on Central Government expenditure on education show an increasing trend. Locally-controlled expenditure, which was 1.4% of GDP in 1989/90, is budgeted to be 1.6% of GDP in 1992/93. Donor disbursements in the education sector have increased from 0.2% of GDP in 1989/90 to a budgeted 0.8% of GDP for 1992/93. Despite the increasing trend, Government spending on education remains far below other African countries (5% of GDP is about average). Inspection of data on Central Government spending per student reveals that the distribution of subsidies is skewed toward beneficiaries at the higher levels of the system. Reflecting the increased expenditure on primary education in the 1991/92 budget, the ratio of benefits among university, secondary, and primary students moved from 225:6:1 in 1990/91, to 157:3:1 in 1991/92.

Policy Framework

The above issues have all been well-recognized in Uganda, including particularly in the Report of the Education Policy Review Commission (1989), and in a draft White Paper which has been issued for public discussion, prior to eventual adoption. The key recommendations in the White Paper are the following:

Achievement of universal primary education by 2001/02;

Abolition of tuition fees at the primary level, in steps beginning 1992/93 and to be completed 1999/2000;

Reforming the structure of the system by extending primary by one year and reducing lower secondary by one year (thus changing the pre-tertiary structure from 7-4-2 to 8-3-2);

Adequate facilities for girls, and greater gender equity in the teaching staff and school administrative positions;

Vocationalization of education throughout the primary and secondary cycles;

The EPRC reconfirmed the existing practice of using the local indigenous language as the medium of instruction through P4, then shifting to English as the medium of instruction beginning with P5. The draft White Paper endorses this, with the modification that in urban areas English could be used as the medium of instruction beginning with P1. The White Paper additionally recommends that Kiswahili be made a compulsory subject throughout the primary and secondary cycles.

Establishing a National Council on Higher Education to coordinate the tertiary level.

Concerning Central Government financing for education, the White Paper noted that the Government revenue effort was expected to increase to 16-20% of GDP in the near future, and that more Government funds would be allocated to educational development.

Additionally, the Makerere University Visitation Committee has recommended institutional, policy, and financial reforms necessary to bring about a sustainable revitalization of Makerere University, including a student loan scheme to cover full or partial tuition.

The basic thrust of the Government's strategy has been characterized in the Background to the Budget document as emphasis on primary education, to be financed by "shifting resources from secondary and tertiary institutions, particularly where they are being used for non-instructional subsidies, towards the primary level."

The Government's focus on the objective of universal quality primary education is entirely appropriate, in view of the well-established linkages between primary education and development, both in terms of economic returns (earnings), and social returns such as lower fertility, and improved child survival. The Government's strategy of moving toward that objective by shifting the distribution of Government expenditure relatively toward primary away from secondary and tertiary, through cost-sharing at those levels, and abolishing fees for primary, is also entirely appropriate.

The relevant question then becomes the magnitude of the necessary shifts. It would be appropriate to increase Central Government expenditure on primary education to about 3.5% of GDP. Increased spending on primary is needed to provide instructional materials, provide in-service training to teachers, and pay teachers a living wage. Reflecting Uganda's macro constraints, Central Government spending for non-primary purposes would probably have to be constrained to about 1.2-1.5% of GDP. It would certainly be necessary to mobilize additional resources for secondary and higher education, but these would have to be mobilized from beneficiaries. Increased Government financing of primary would alleviate the disparities arising from the present, excessive dependence on PTA financing, and would reduce dropout from low-income families, particularly girls.

Unfortunately, the Government's revenue effort has not been improved as rapidly as hoped in the White Paper. In this context, it is important to consider the implications for the education sector of the Government's strategy, as set out in Way Forward II, of concentrating Government expenditure on the most cost-effective intervention, in order to avoid spreading resources too thinly. The Government should certainly aim at improving the quality of instruction in the core subjects of the existing curricula, and at increasing access. The question is, to what extent should resources (including time as well as funds) be reallocated away from these highest priority objectives, to the other objectives set out in the White Paper, i.e., vocationalization and additional language instruction. For the decade of the 1990s it would be desirable for the Government to concentrate largely on improving the quality of instruction in the core subjects of the existing curriculum, and on increasing access.

Concerning vocationalization, studies of diversified secondary schools in a number of countries have found that, such schooling is relatively more expensive, graduates often did not find employment in the fields in which they had been trained, and therefore did not receive economic benefits from their more expensive schooling, "arguing strongly against vocational schooling on cost-benefit grounds." Instead, the trend in developing countries has been toward " clear structural separation of training from general education". Training can be most efficiently provided in the workplace, or in "demand driven" private training facilities, as in Zimbabwe.

The educators' consideration of UPE have understandably focussed on school factors. However, in the Ugandan context, out-of-school factors are also important. In particular, family planning will be vitally important for the achievement of UPE in Uganda, for two reasons: (a) slower growth of the school-age cohort, over the medium-to-long term; (b) reduced girls' dropout to care for younger siblings. Projections indicate that fertility decline could enable achievement of UPE to be brought forward by more than a decade.

THE HEALTH SECTOR

Health Conditions

Uganda's aggregate health indicators, such as infant mortality, and life expectancy at birth, are among the world's worst. The leading specific causes of death are AIDS, tuberculosis, and malaria, for adults; and malaria, pneumonia, and diarrhea for children. With inadequate family planning services, pregnancy-related health problems are also important.

The leading causes of illness and death are all preventable, although with varying degrees of difficulty, and requiring a variety of interventions. The experience of other countries shows that policies to gain control over preventable causes of death can result in swift changes in infant mortality and life expectancy.

Health Care System

The public sector accounts for 61% of secondary and tertiary hospitals, and 58% of the registered outpatient clinics. Thus, although the Government has the largest formal health care infrastructure, the NGO sector is also very important in the formal health care system. Data on the location of formal sector facilities shows that they are adequately distributed, with the exception of the North where there is relatively less access. In addition, an "informal" sector (drug shops, for example) has also developed in recent years.

The Ministry of Health employs about 9000 medically trained personnel, and about 9000 group employees, for a total of about 18,000. The formal NGO sector is estimated to employ about 3400 medically trained people. Salaries for physicians and nurses are about 2.2 times greater in the NGO sector than in the public sector.

The ratio of population per physician - 25,000:1 - is greater than in many other low-income countries, and twice the ratio of 1965. Uganda has reacted pragmatically to the loss of physicians by substituting trained medical assistants for them. Training capacity is adequate, and indicates considerable capacity to increase available professionals over the next decade. From the training and employment data, it appears that many trained health workers are working abroad or in private practice. The principal problem revealed by the personnel data is a personnel mix which favors hospital-based personnel over field-level staff.

The Government health care system is organized into three principal tiers: Mulago Hospital, the national referral hospital, in Kampala; the District Medical Officer (DMO) and district hospital in each district; and lower-level facilities in the district. The upper tiers are administered by the Ministry of Health, while district administrations, in principle, are supposed to be responsible for the lower-level facilities. In fact, most of the health workers in the lower-level facilities are on the MOH payroll and are seconded to local governments. Under the Decentralization program, it has been decided that district hospitals will become part of the district health administration, and that the District Medical Officer will, in the future, report to the District Executive Secretary. The Report of the Task Force on Health Services Decentralization makes specific recommendations.

Data on service delivery in the public and NGO sectors reveal that, although the NGO sector accounts for 38% of hospital beds, it provides 54% of the bed-days, due to greater capacity utilization, and greater staff productivity. A population-based survey found that, among those seeking formal sector care, 40% used Government services while 60% visited private for-profit, or NGO, clinics.

Health Expenditures and Financing

As the Ministry of Health has itself recognized, the existing MOH budget structure is not well-suited to measuring progress towards health expenditure policy objectives. This report therefore applies a framework for classifying health sector expenditure based upon the World Bank's Health Finance Policy Paper. Category 1 services - activities benefitting the community, such as vector control, epidemiological data collection and analysis, health education, regulation, health policy formulation - are those which must be carried out by Government if they are to be provided in adequate quantities. Private markets will not deliver enough of these goods and services, because the beneficiary cannot own the benefit of the service without having to share it with others who do not pay. Category 2 - personal health services of a preventive nature - is a mixed category, since treatment of the symptoms of a communicable disease has "private good" characteristics, while preventing the infection of others is a "public good". For example, individuals may be willing to pay something for immunizations, but if immunizations are not subsidized or required by law, people may under-invest in them from a public health perspective - not enough to interrupt transmission of the disease. Category 3 - curative health care - is an area where the private sector can be expected to take primary responsibility. If the government becomes involved in providing these services, it can emulate the behavior of private firms in charging for them.

The mission's review of Central Government health expenditure reveals the following points:

Health has absorbed a relatively small share of the financial resources directly controlled by the Government. Locally-controlled expenditure on health was only 0.5% of GDP in 1989/90, and 0.6% of GDP in 1990/91. Donor disbursements account for the bulk of Government expenditure in the health sector, outweighing locally-controlled spending by a factor of 2.7 times in 1990/91.

The allocation of Government spending has favored Category 3 (curative) services. In 1990/91, 69% of Government health expenditure was for personal health services (including 63% on curative and 6% on preventive), 11% on community health, and 20% on training and administration. In other words, only 17% of funds were spent on Categories 1 and 2.

When private health spending, which is greater than Government health spending, is added, the picture of total health spending is even more skewed toward curative. This report estimates that about three-fourths of total health spending is devoted to curative care of preventable diseases, despite the fact that most of this curative spending could be avoided through public action.

Concerning cost recover, most NGO facilities recover their recurrent costs. This suggests that many Ugandans have experience in paying for good quality services. In the Government sector, it was announced in the 1992 Budget Speech that Government hospitals would be allowed to operate private wings which would charge full cost. At the local level,

many health units, with the approval of their management committees, have begun to charge fees. In Kabarole District, a study found that revenues from user fees in Government health units, while not addressing all constraints, enabled supplies and health workers' availability to be increased, thereby contributing to improved service. However, thus far, recognized user charges have played only a minor role in the financing of Government health services.

Policy Framework for the Health Sector

The issues described above are well recognized in the Government's current planning/policy statement, entitled The Three Year Health Plan Frame 1993-95: Financing Health for All: Executive Summary (December 1992). TYHP proposes a strategy along the following lines:

> Existing services will be restored, by rehabilitating war-damaged units and increasing operational expenditure, so that they operate at a minimum acceptable level of quality. However, Government will not support expansion (in terms of new units) over the next three years.
>
> Resources will be reallocated to focus more on prevention and promotion, including especially MCH/FP, immunization, water and sanitation, nutrition, HIV/AIDS control, and malaria.
>
> In order to increase resource mobilization for the health sector, Government health units should begin to collect significant amounts from user charges.
>
> The role of NGO facilities should be considered in such a way as to reduce duplication of efforts between the Government and nongovernmental sectors. This could include selective financing of those NGO facilities that have difficulty in breaking even.

These strategy directions are highly appropriate. In order to move to effective action, the Government will need to attend to the following issues: greater total health spending; measurement of reallocation toward more cost-effective services; addressing the institutional requirements of Decentralization; and strategies for addressing particular health problems.

FAMILY PLANNING

The Uganda Demographic and Health Survey 1988/89 gathered information on knowledge, attitude, and practice of family planning. Among Ugandan women, 82% had knowledge of family planning, and 71% had a favorable attitude. These percentages were higher among educated women. Respondents' assessment of husbands attitudes, however, were: approve, 26%; disapprove, 40%; don't know, 34%. These data indicate that male attitudes is a problem area. Contraceptive practice was very low at only 5%, including only 2.7% for modern methods. Reasons for non-use included lack of knowledge, religious reasons, opposition by the woman or her husband, lack of accessibility, and inconvenience.

Clearly, there is an enormous gap between generally favorable attitudes, (at least among women, but not men), and very limited practice of family planning. A DHS comparative study has measured demand for contraception to be 32% of married women in Uganda, as compared with only 5% use, so that only about 15% of demand was being satisfied, which was the lowest rate of demand satisfaction among all 25 DHS countries. This

reflected the relative lack of access; among the eleven DHS countries for which service availability data were collected, Ugandan women were found to have the least access.

UDHS 1988/89 found that family planning services were provided by the following sources: public sector, 47% of users; NGOs, 33%; private for-profit sector (private doctors, pharmacies, etc.), 20%. Reflecting the lack of a reporting system, unfortunately there are no current usage data available.

It is estimated that only about 90 out of a total of 700 government health facilities offer family planning (FP) services. The service delivery points need better trained staff, more equipment, and more reliable supply. The available personnel are unevenly distributed, with a bias in favor of urban facilities. Most peripheral health facilities are staffed by nurse aides or medically untrained personnel. Clinic-based methods are not readily available due to lack of trained staff. However, the issue of FP training is a priority of USAID and UNFPA, the major donors in the sector. Contraceptive commodities are procured by the two donors. The distribution system is inadequate, as is storage and recordkeeping at the service delivery points. Eleven doctor/nurse teams have been trained in surgical contraception, and this method is now offered at 15 locations.

The principal NGO in this area is the Family Planning Association of Uganda (FPAU). It provides services through 16 static clinics, serving a mainly urban clientele, and 5 mobile clinics. The clinics provide oral contraceptives, injectables, and barrier and chemical methods. The IUD, long term and permanent methods are not provided due to lack of trained personnel. Most of FPAU's funding comes from the International Planned Parenthood Federation, an international NGO of which FPAU is a member.

In the private for-profit sector, USAID has recently introduced a Social Marketing Project. To date, the project has been selling only condoms. Since the introduction of the project in 1991, sales have risen substantially, reaching 100,000 in the third quarter of 1992.

For the reasons discussed in this report, reducing fertility is an urgent priority in Uganda. Looking to the future, Uganda can learn from the experience of other countries, which has demonstrated that "Although contraception has spread because of voluntary actions by couples, their decisions and actions have been facilitated by organized family planning programs . . . Fertility decline would undoubtedly have begun even without Government commitment, but it would have been a much more lengthy process." There is a need to establish a focal point for the formulation of objectives for a national family planning program (both ultimate objectives such as fertility decline, and proximate objectives), and monitoring of progress toward their achievement. One possibility would be a governmental agency as in Zimbabwe or Indonesia; another possibility would be to assign such a responsibility to the private FPAU, but with oversight and financial grants coming from the Government.

Service delivery approaches will have to be a mixture of clinics and social marketing for the urban population, and outreach services (community-based distribution, mobile clinics) for the rural population. New methods, such as the implant Norplant, should be introduced. Surgical contraception should be made available in all regions of the country. There is a need for a modern logistic system to ensure a continuous flow of contraceptive commodities. FP training needs to be expanded. There is a need to develop a national IEC strategy, aimed at specific target groups. Finally, there is a need for research and evaluation on attitudes which do not favor family planning use, and on the effectiveness of service delivery approaches.

CONCLUSION: TOWARD AN INCREASED AND BETTER ALLOCATED SOCIAL SECTOR EFFORT

In order for progress to be made in improving Uganda's social indicators, as has been discussed it will be necessary for spending on the social sectors to be both increased and better allocated. The rough projections are presented in order to illustrate the order of magnitude of desirable increases/retargetings recommended in this report, and to stimulate the eventual preparation of more specifically justified scenarios. The following are the key points:

Total (public plus private) social sector spending goes up by more than half, from 7% in 1989/90 of GDP to 11% of GDP by 1994/95. The increase in total spending is largely due to increased Government spending; this will require success in increasing tax revenue collections.

Although the total magnitude of social sector cost recovery (private spending) would remain about the same, there would be a substantial restructuring of its pattern. In particular, there would be more cost recovery from beneficiaries for health (for curative services), and less (in the aggregate) for education. In addition, there would be a substantial restructuring of the pattern of cost recovery within the education sector - much less cost recovery at the primary level, and more cost recovery at the secondary and tertiary levels. Shifting the costs of primary education relatively more onto the Government budget is essential for achieving universal primary education, including especially female UPE which is of fundamental importance for achieving results throughout the social sectors.

On the resource allocation side, education would increase from 3.7% of GDP in 1989/90 to 6% of GDP by 1994/95, considerable portion of which would go to paying living wages for teachers. Although the distribution of Government spending would shift radically toward primary, while the distribution of private spending would shift substantially toward secondary and tertiary, the distribution among levels of total spending would not change very much, as all levels would receive substantial increases in real terms.

In the health sector, Government spending on community health interventions and preventive measures would increase severalfold. One of the most important preventive programs should be family planning - the prevention of unwanted fertility. Curative health spending would also increase in real terms, but its share of total health spending would fall.

If an increased and better allocated social sector effort were to be sustained over the medium-to-long term, it would be reasonable to expect significant improvements in Uganda's social indicators by the year 2000, and dramatic improvements by 2010. The most essential policies for achieving improved indicators are the universalization of primary education of reasonable quality, including particularly relaxing the constraints on girls' participation; reorientation of the Government effort in the health sector toward community health interventions and preventive measures; and making effective family planning services widely available to Ugandan women.

I. UGANDA'S SOCIAL INDICATORS IN COMPARATIVE PERSPECTIVE

1.1 The first three sections of this chapter set out the main social indicators for Uganda, and explore the extent to which Uganda is in a "deficit" position in comparison with other countries. The fourth section explores the extent of domestic, inter-regional variations in Uganda's social indicators, while the final section assesses the implications of the indicators.

A. Demographic and Health Indicators

Fertility

1.2 Uganda is one of twenty-five developing countries, including ten Sub-Saharan African (SSA) countries, in which a Demographic and Health Survey was carried out in the late 1980s. The Uganda Demographic and Health Survey (UDHS), carried out during 1988/89, measured Uganda's total fertility rate (TFR) to be 7.3. This is the highest rate among the DHS countries (Annex A, Figure 1), and the fourth highest rate among the 120 countries included in the World Bank's database. It compares with average TFRs of 6.5 in SSA countries, and 3.8 in low-income countries generally (Table I.1). A negative relationship between women's education and fertility was found. Among the DHS countries, Uganda is the only one for which no evidence of fertility decline was found. 1/ In the other nine SSA countries, the TFR declined by 6-19%, between the early 1980s and the late 1980s.

1.3 The desired total fertility rate (DTFR) was estimated at 6.5 in Uganda, in comparison with an average of 5.4 in the other SSA countries covered by DHS, and an average of 3.7 for all twenty-five countries.2/ This is unsurprising, in view of the low level of women's education, which is the strongest correlate of interest in fertility limitation. The gap between the TFR and the DTFR does indicate, however, that some of Uganda's fertility is unwanted.

1.4 UDHS found the contraceptive prevalence rate in Uganda to be only 5%, which was the second-lowest among all DHS countries (Chapter VI, Figure VI.1). Modern methods accounted for about half of contraceptive prevalence, or only about 2.5% of married women of reproductive age.

Mortality

1.5 The crude death rate is estimated to have been 22 per 1000 during 1985-90, and to be currently about 20 per 1000. Thus, Uganda's crude death rate is estimated to be twice the average for low-income countries generally (and of neighboring Kenya), and substantially above the SSA average. Uganda's underlying mortality rate is estimated to be somewhat above the SSA average, reflecting poor health conditions. In addition, deaths associated with the civil war accounted for "extraordinary" mortality during the 1980s, while in recent years AIDS, which is now the leading health problem of adults, has emerged as another source of extraordinary mortality. Because of the AIDS epidemic, life expectancy at birth, which ordinarily increases as countries develop, is projected to decrease by about 4 years between 1985-90 and 1990-95, falling to less than 43 years, which would be lower than 1990 estimates for all other countries in the World Bank's database.

1/ DHS Comparative Studies, No. 2, Fertility Levels and Trends (1990), p. 11

2/ DHS Comparative Studies, No. 3, Reproductive Preferences (1991), p. 15

Table I.1: DEMOGRAPHIC INDICATORS

	Uganda 1985-90	Uganda 1990-95 Est.	Kenya	Ghana	All Sub-Saharan Africa	All Low-income
Contraceptive prevalence rate (%)	5	n.a.	27	13	n.a.	n.a.
Desired total fertility rate	6.5	n.a.	4.5	5.3		
Total fertility rate	7.3	7.2	6.5	6.2	6.5	3.8
Crude birth rate (per 1000)	50	51	45	44	46	30
Crude death rate (per 1000)	22	20	10	13	16	10
Underlying	17	17				
AIDS-related	1	3				
War-related	4					
Life expectancy at birth	46.5	42.7	59	55	51	62
Population growth rate (%)	2.8	3.1	3.5	3.1	3.0	2.0
Dependency ratio (%)	107	107	114	99	97	66

Sources: Desired total fertility rate is from Institute for Resource Development, DHS Comparative Studies No. 3, Reproductive Preferences. Uganda CPR, TFR, and DTFR are from the Uganda Demographic and Health Survey, 1988/89. Other Uganda data are mission estimates based on review of UDHS and censuses. Remaining data are for 1990, and are from World Development Report 1992, Tables 1, 26, and 27.

Population Growth and the Dependency Ratio

1.06 On the basis of the final count (approximately 16.7 million persons) from the January 1991 population census, the average annual population growth rate was 2.5% during the intercensal period 1980-91. However, the rate of natural increase, arising from births and "normal" mortality, is estimated to have been about 3% during the 1980s. The population growth rate was depressed below the rate of natural increase becuase of war-related "excess" mortality. 3/ The Government has similarly stated that "the growth rate has been influenced by the socio-economic decline and the internal conflicts between 1980 and 1985." 4/ Reflecting a crude birth rate of 51 and a crude death rate of 20, the population growth is estimated to be 3.1% for 1990-95 (Table I.1), which is about average for SSA, but well above the average for low-income countries generally.

3/ Althea Hill, "A Note on the Demography of Uganda" (August 1992).

4/ Statistics Department, "Final Results of the 1991 Population and Housing Census" (October 1992).

1.7 The dependency ratio (the ratio of young people 0-14 and retirement-age people 65+, to the working-age population 15-64) is estimated to be 107%, far above the average of 66% for low-income countries generally.

Table I.2: INFANT MORTALITY RATES, 1965 AND 1990
(per thousand)

	1965	1990	Percentage Decrease
Uganda	119	117	2%
Kenya	112	67	40%
Zimbabwe	103	49	52%
Ghana	120	85	29%
All SSA countries	157	107	32%
All low-income countries	124	69	44%

Source: World Development Report 1992, p. 272

B. Children's Health and Nutrition

Health Status

1.8 As can be seen from Table I.2, Uganda is estimated to have an infant mortality rate which is about 9% higher than the SSA average, and 70% higher than the average for low-income countries generally. 5/ Strikingly, Uganda's infant mortality rate is about the same today as in 1965, whereas the great majority of developing countries have recorded substantial declines. Comparing the Uganda DHS results with the Kenya DHS results, child mortality (ages 1 up to 5) was found to be almost three times greater in Uganda. A newborn Ugandan baby has only an 80% probability of reaching age 5. UDHS found infant and child mortality to be negatively correlated with mothers' education.

1.9 UDHS did not attempt to elicit the causes of children's deaths, but a survey in Mbarara District in 1988 found that the leading causes of under-5 mortality were measles, diarrhea, malaria, and respiratory infections. In the period since then, neonatal AIDS has emerged as a significant cause of illness and death among young children.

5/ On the basis of mothers' recall, UDHS measured infant mortality to have been 101 per thousand during the period 1983-88. The Bank staff estimate shown in Table 1.2 above reflects the emergence of AIDs mortality in the late 1980s.

1.10 Mothers reported to DHS that 24% of children had an episode of diarrhea in the two weeks before the survey, while 41% had an episode of fever in the four weeks before the survey. Among those children with fever, 57% were treated with antimalarial drugs. It was found that 49% of children had at least some immunizations recorded on a health card, while mothers reported that an additional 22% of children, without health cards, had received at least some immunizations.

Nutritional Status

1.11 DHS found that 45% of surveyed children were two standard deviations or more below the average height-for-age of the World Health Organization's reference population. These data indicate stunting arising from chronic undernutrition. There was a negative correlation between mothers' education and stunting. The prevalence of low (more than 2 SDs below the average) weight-for-height, or "wasting", on the other hand, was only 2%, leading UDHS to report that "acute undernutrition is not a major problem in Uganda."

1.12 What factors may have contributed to the observed stunting? The anthropometric measurements may reflect: inadequate food intake arising from household food insecurity; inability of the body to effectively utilize food, due to infection; or both.

1.13 Concerning food, the World Bank's recent agricultural sector mission has found that food production has increased by 6% annually in recent years, reflecting the return of political stability to rural areas, allowing families to return to abandoned areas and resume farming; restoration of rural infrastructure and services; and improved marketing policies. The average food availability is more than adequate in terms of calories (3400 calories per capita in 1991). However, much of the diet comes from low-protein foods such as banana, potato, and sweet potato, and protein deficiency may contribute to the observed stunting. In addition, there may be areas of food insecurity in the relatively poorer Northern and Eastern regions of the country. The World Bank's report on the consequences of AIDS has noted that, in areas with high levels of HIV infection, dietary changes such as a reduction in bean, milk, and cereal consumption, and increased reliance on bananas, have been reported; this impoverishment of the diet can be expected to contribute to child malnutrition.

1.14 It is generally agreed that infection contributes to poor nutrition in Uganda. For example, in 1989 a consultant for USAID identified the following factors as contributing to the stunting problem: frequent bouts of malaria, diarrhea, and measles without adequate catch-up growth; inadequate weaning practices; increase in women's work load, resulting in reduced time for breastfeeding and child care. 6/ (Neonatal HIV infection cannot be a major factor explaining the UDHS results, since AIDS would be manifested in wasting, whereas the major finding of UDHS was stunting.)

1.15 A limitation of past survey data in Uganda, in terms of assessing a multicausal problem such as nutrition, is that surveys which measured health and nutrition did not measure income and expenditure, or water and sanitation, and conversely. Analytical work based on more recent and more complete information is needed. During 1992, an Integrated Survey, which collected all of the important household economic and social variables in a single survey, was being carried out under the Social Dimensions of Adjustment (SDA)

6/ Charles Teller, USAID consultant, "Nutrition Situation and Program Assessment: Towards a Practical Home-based Food and Nutrition Strategy for Uganda" (1989)

component of the Program to Alleviate Poverty and the Social Costs of Adjustment (PAPSCA). This will provide a sound database for assessing the nutrition situation as well as other social issues.

Table I.3: ENROLLMENT RATIOS
(percent of age group)

	Uganda	Kenya	Ghana	All Sub-Saharan Africa	All Low-Income
Primary - total	71	94	75	69	105
Female	63	92	67	61	96
Secondary - total	13	23	39	18	38
Female	7	19	30	14	31
Tertiary	1	2	2	2	3

Source: Uganda data are for 1990, and are from Statistical Appendix Tables E.1 and E.8; other data are for 1989 and are from WDR 1992.

C. Education Indicators

1.16 In view of the limited development of the education system in the 1960s, and its subsequent deterioration, education indicators for Uganda's adult population are quite low. UDHS found that 38% of women surveyed had no education, and 43% had received some primary education, while only 19% had completed primary school. The low educational attainments of the adult population obviously has implications for the delivery of messages on subjects such as agricultural extension, family planning, nutrition, for which literacy is important.

1.17 Available enrollment ratios for Uganda's children and youth are illustrated in Table I.3. According to these data, the primary enrollment ratio of 71% is about average for SSA, but as discussed in Chapter IV there are reasons to believe that enrollment data in Uganda are inflated, in response to incentives for overreporting. The secondary enrollment ratio is only about half the SSA average, with the girls' secondary enrollment ratio particularly low at only 7%. At all levels, enrollment ratios in Uganda lag well behind the averages for low-income countries generally.

1.18 Although most children start primary school, the primary cohort survival rate is low, at only 32%. There have not been any empirical studies of why children are not in school. The most commonly hypothesized explanation is fees. For example, the Ministry of Education has stated that, due to the decline in the real value of Government financing for the schools during the years of economic deterioration, the burden of financing schooling had shifted heavily to the parents, with the result of "the lower income group either not enrolling or withdrawing children from school when the financial burden becomes too great." 7/ Unfortunately, there are no statistics available on PTA fees. The poor learning conditions in the schools are undoubtedly another factor discouraging attendance. In the Integrated Survey carried out in 1992, parents were asked why out-of-school children were not in school.

1.19 Although almost as many girls as boys enter primary school, there are increasing gender gaps at higher levels of the educational ladder. One finding was that "of children entering P.1, the probability of boys completing S.4 (lower secondary) is twice that of a girl, and that probability of continuing on to upper secondary almost three times as high."8/ These gender gaps reflect perceptions of women's actual and potential roles in society; the perceived costs and benefits of schooling for daughters versus sons; and the labor requirements of household production.

1.20 In addition to the quantitative issue of enrollment ratios, there is cause for concern over the low quality of education in Uganda since, ultimately, learning rather than mere enrollment is the objective of the educational process. This is discussed in Chapter IV.

D. Inter-regional Variations in Social Indicators

1.21 One question worth exploring is the extent of variations in social indicators among different localities in the country. In some countries, these are significant. In Kenya, for example, the stunting rate was found to vary by a factor of three between the best and worst districts, and the infant mortality rate was found to vary by a factor of three between the best and worst provinces.

1.22 Table I.4 displays survey-based data on household expenditures and health, and education data based on administrative statistics. The table shows that the Central and Western regions had the highest average household expenditure and the lowest proportion of households in the low-expenditure group, while the Eastern and Northern regions were poorer. This is as expected, since the North is a region with a less favorable agricultural endowment, and the North and the East were the regions which were pacified last. The North and the East had the highest infant mortality rates. Curiously, the Western region displayed the highest rate of stunting, but stunting rates were also high in the North and East.

1.23 The education data suggest that there is a negative correlation between household expenditure and primary enrollment; the poorer regions have higher enrollment ratios. This is difficult to believe. Another possibility is that the enrollment ratios for the Central and Western regions are relatively accurate, while the enrollment in the North is inflated. The Integrated Survey will allow the generation of population-based enrollment-ratio estimates, which can be compared with the questionable administrative data.

7/ Ministry of Education, Five Year Investment Program (June, 1991), page 12.

8/ Five Year Investment Program, p. 7.

Table I.4: INTER-REGIONAL VARIATIONS IN SOCIAL INDICATORS

Region	HBS DATA: Average Monthly Household Spending	HBS DATA: Low-expenditure Households (%)	DHS DATA: Under-5 Mortality (per 1000)	DHS DATA: Stunting (%)	Primary Enrollment Ratio (%) Total	Primary Enrollment Ratio (%) Female
Kampala	59944	19.9	174	22	n.a.	n.a.
Central	36477	51.1	187	35	62	63
Western	35813	44.2	179	47	68	62
(Southwest)			172	54		
Eastern	23695	61.3	207	45	78	69
Northern	22087	68.2	211	45	85	62
Uganda	34468	50.6	180	45	71	63
------	-----	----	---	--	--	--

Sources: Household Budget Survey 1989-90; UDHS; Statistical Appendix Table E.1

1.24 In general, the magnitude of inter-regional variations in the social indicators is not very striking. (It is possible, of course, that one might find a greater degree of variation among districts rather than regions, but the surveys did not have sample sizes large enough to allow the generation of district-based estimates.) It is worth pointing out that, on the under-5 mortality measure, Uganda's best region ranks below Kenya's worst province (Coast Province, 156), while on the stunting dimension, Uganda's best region ranks below all except three of Kenya's districts. Thus, it is fair to say that Uganda's social indicators are low throughout the country.

E. Assessment and Implications

1.25 "People are both the ends and the means of development. Although improved health, nutrition, and education are ends in themselves, healthy and educated human beings are also the principal means for achieving development." 9/ Thus, unlike some other development indicators which are "means" indicators (manufactured exports, for example), the social or human resource indicators are simultaneously "ends" and "means" indicators. The deplorably low level of Uganda's social indicators is therefore both an indicator of a low level of human welfare, and a reflection of constraints which Uganda must alleviate, by "investing in people", if Uganda is to achieve sustained, long-term growth.

9/ The World Bank, Sub-Saharan Africa: From Crisis to Sustainable Growth, a Long-term Perspectives Study (1989), p. 63

1.26 The Government has recognized the need to improve some of Uganda's social indicators. For example, there is a commitment to increase the primary school enrollment ratio, with universalization foreseen for 2003. On the other the hand, there is no specific commitment to increasing contraceptive prevalence. In the Budget Speech of July 1991, the Minister of Finance declared that "Improving basic social services represents a pressing area for Government action in the next phase of the reform agenda." However, there are pressures for increased Government spending for other purposes as well, and it will be a continuing challenge for the Government to keep its efforts focussed on appropriate high-priority objectives.

1.27 When considering its social sector strategies, it will be important for the Government to keep in mind the interrelationships among the social indicators. Thus, the effects of female education on fertility, infant mortality, and child nutrition were mentioned in paras. 1.02, 1.06, and 1.08 above. The high level of fertility, and the short childspacing intervals inevitably associated with it, has adverse implications for mothers' and children's health. Fertility may have an adverse impact on female education when teenage pregnancies result in school dropout, or when girls may be required to stay home from school in order to take care of younger siblings. It is reasonable to believe that Uganda's extremely high fertility level is one factor contributing to Uganda's lack of savings, at both the household and national levels.10/ Over the medium term, high fertility causes the number of school-age children to grow more rapidly, exacerbating educational access and quality problems. The high level of infant and child mortality may encourage couples to have more children born than they ultimately want, in order to achieve the desired number of surviving children. The high level of adult mortality in Uganda may make it difficult for survivors to keep children in school.

1.28 When these interrelationships are taken into account, it is apparent that the effectiveness of efforts to address "social deficits" in education, health, and family planning sectors, will be enhanced if they are supported by complementary efforts to address related sectors as well. Policies to address these social deficits are discussed in the middle part of this report, while the concluding chapter attempts to summarize the social sector strategy.

10/ In its first effort in recent years at estimating GDP by expenditure, and savings, Uganda's Statistics Department has found that, in 1989 (the only year estimated thus far), personal and government consumption amounted to 102.7% of GDP, and that gross domestic savings were -2.7% of GDP. Statistical Bulletin No. GDP/3, Gross Domestic Product, Uganda, 1981-90

II. DEMOGRAPHIC PROSPECTS, AND CONSEQUENCES OF HIGH FERTILITY AND RAPID POPULATION GROWTH

2.1 In the previous chapter, a "snapshot" was provided of Uganda's demographic indicators as of the early 1990s. It was pointed out that the Ugandan population is characterized by unusually high birth and death rates. The population is therefore subject to rapid turnover, both diminishing the returns to "investment in people", and making it more difficult to achieve. In this chapter, the demographic indicators are set into motion, in order to explore the possible evolution of Uganda's demographic indicators over the medium to long term, and the consequences of high fertility, and rapid population growth.

A. Major Demographic Variables, and Alternative Scenarios

Mortality, with Particular Reference to AIDS 1/

2.2 Uganda's underlying health conditions are expected to improve over the next two decades, reflecting increased education, particularly for females; increased incomes; efforts to control environmentally-related diseases such as malaria; and better health services. Therefore, the underlying (excluding AIDS) infant mortality rate is expected to decrease from 110 in 1990-95 to 89 in 2000-05 and 78 in 2010-2015, while life expectancy at birth (if there were no AIDS) is expected to increase from 49 years in 1990-95, to 53 in 2000-05, and 55 in 2010-15.

2.3 However, the AIDS epidemic has tragically emerged as a major factor in Uganda's demography. A national seroprevalence survey in 1987/88 found an adult HIV prevalence rate of 9%, with higher rates in urban areas. On the basis of observations among selected groups, such as women attending antenatal clinics in Kampala, one-third of whom are infected, the national average seroprevalence rate is probably even higher today, in the range 10-12%. Because of the long latency period, even if effective AIDS control practices were adopted today, the annual number of AIDS deaths will continue to increase for the remainder of this decade, and would stabilize and then begin to decline only around the year 2000.

2.4 The impact of the AIDS epidemic on Uganda's demographic indicators is shown in Table II.1, which displays three AIDS scenarios. The "without AIDS" scenario, of course, is not a scenario that is available to Ugandan policymakers; its usefulness lies in providing a benchmark with which either of the two "with AIDS" scenarios can be compared, the differences representing the impact of AIDS. The "AIDS interve...on" scenario assumes that a program of promotion of condom use, other behavioral changes, and control of non-AIDS sexually transmitted diseases, all supported by a diverse information, education, and communication campaign, is implemented. The Government has, in fact, established an AIDS Commission with these objectives in mind. Because of the latency period, the "AIDS intervention" and "uncontrolled AIDS" scenarios begin to differ significantly only after the year 2000.

1/ The discussion of AIDS in this report is based on another World Bank report, "Uganda: the Economic Impact of AIDS" (draft, 1992)

Table II.1: THE IMPACT OF AIDS ON DEMOGRAPHIC MEASURES

	1990-95	1995-00	2000-05	2005-10
Death Rate (20-59 age bracket)				
Without AIDS	8.9	8.4	7.8	7.3
Uncontrolled AIDS	15.8	19.1	20.3	20.4
AIDS Interventions	15.7	18.5	18.2	16.0
Under-5 Death Rate				
Without AIDS	182	164	143	131
Uncontrolled AIDS	203	203	196	181
AIDS Interventions	203	200	185	159
Overall Death Rate				
Without AIDS	16.9	15.5	13.7	12.4
Uncontrolled AIDS	20.5	21.7	21.4	20.1
AIDS Interventions	20.4	21.3	20.0	17.1
Birth Rate (Constant Fertility)				
Without AIDS	51.9	52.2	51.3	50.3
Uncontrolled AIDS	52.0	52.7	52.7	52.6
AIDS Interventions	51.9	52.7	52.6	52.3
Population Growth Rate				
Without AIDS	3.5	3.7	3.8	3.8
Uncontrolled AIDS	3.1	3.1	3.1	3.2
AIDS Interventions	3.1	3.1	3.3	3.5

Source: Demographic tables in Annex C.

Note: It is not hypothesized here that AIDS has any impact on fertility. The crude birth rate is smaller in the "without AIDS" scenario simply because of a larger denominator.

2.5 AIDS mortality is concentrated in two age brackets: adults aged 20-59, and children under 5 who have acquired AIDS neonatally. As a result of AIDS, during 1995-2000 the death rate among adults aged 20-59 is expected to be about 120% greater than it otherwise would be. The losses among educated, urban groups such as managers, professionals, and skilled workers, who are disproportionately affected, can be expected to slow the growth of the modern sector of the Ugandan economy, over the medium to long term. The death rate among children is expected to be about 20% greater because of the AIDS epidemic, while the increase in the overall crude death rate is about 40%.

2.6 By increasing the crude death rate by about 6 per 1000, AIDS will cause the population growth rate to be about 0.6% less than it otherwise would be. Thus, if fertility remains constant, during 1995-2000, the population growth rate would be 3.1%, whereas without AIDS it would by 3.7%.

2.7 Perhaps contrary to what one might intuitively expect, the AIDS epidemic does not have a large impact on the dependency ratio. Assuming constant fertility, the dependency ratio will increase from 107% in 1990 to 109% in 2000 in the "without AIDS" scenario, and would increase to 111% in either of the "with AIDS" scenarios. The reason for the slightness of the impact on the dependency ratio is that adult AIDS deaths are offset by pediatric AIDS deaths. However, this impact, together with Uganda's extraordinarily high fertility rate, will be enough to give Uganda the highest dependency ratio in the world during the period 1995-2000. 2/ The AIDS epidemic will also result in a significant increase in the number of orphans. Estimates of the current number of orphans range from 400,000 to one million. (The January 1991 census collected data on the parental status of children, but this data has not been tabulated yet.)

2.8 In sum, if fertility remains constant, the Ugandan population will grow rapidly either with or without AIDS. High fertility is not an appropriate answer to AIDS mortality, because an infant cannot step into the shoes of a trained adult. Because of the losses among adults, the AIDS epidemic diminishes Uganda's already overstretched capacity to raise children. The case for fertility reduction in Uganda is not diminished by the AIDS epidemic; on the contrary, it is augmented.

Fertility Change

2.9 In view of high infant and child mortality rates, early age of marriage, traditional preferences for large families, low women's educational status, and lack of effective family planning services, it is not surprising that the total fertility rate was found by the Uganda Demographic and Health Survey to be extremely high, at 7.3.

2.10 What alternative to a "constant fertility" scenario can be considered realistic? On the basis of the Uganda DHS data, the desired total fertility rate (DTFR) was 6.5, suggesting that fertility would be lower if women had access to effective family planning services. This report considers the implications of a declining fertility scenario, in which efforts to increase the supply of family planning services result in the TFR declining to 7.2 during 1990-95, and 6.5 (the 1988/89 DTFR) during 1995-2000. Consistent with the experience of other countries, it is assumed that as female education spreads, and as availability and knowledge of family planning increases, the DTFR will decrease in the future, eventually approaching the 4.5 of Kenya and the 3.7 of developing countries generally. The TFR is assumed to fall to 5.8 during 2000-05, and 5.0 during 2005-2010. The population and family planning program needed to achieve the declining fertility scenario is discussed in Chapter VI.

2/ The dependency ratio is the ratio of the number of children and older people 65+, to the population of working age, 15-64. Thus, if the working-age population is 50% of the total, the dependency ratio is 100%. As indicated in WDR 1991, there were only a handful of countries with working-age population percentages less than 50% (and therefore dependency ratios greater than 100%), and only one as low as 47% - Kenya. However, Kenya's dependency ratio is projected to decrease sharply from 113% in 1990 to 98% in 2000 and 81% in 2010, reflecting its success in family planning. Dependency ratios for other countries are also generally expected to fall below 100%.

Table II.2: ALTERNATIVE FERTILITY AND POPULATION SCENARIOS

	1990-95	1995-00	2000-05	2005-10	2010-15
Total Fertility Rate					
Constant Fertility	7.3	7.3	7.3	7.3	7.3
Declining Fertility	7.2	6.5	5.8	5.0	4.6
Crude Birth Rate					
Constant Fertility	51.9	52.7	52.6	52.3	52.0
Declining Fertility	51.3	47.6	43.8	39.6	38.3
Crude Death Rate					
Constant Fertility	20.4	21.3	20.0	17.1	14.1
Declining Fertility	20.3	20.6	18.9	16.1	13.6
Population Growth Rate					
Constant Fertility	3.1	3.1	3.3	3.5	3.8
Declining Fertility	3.1	2.7	2.5	2.4	2.4
Population (in millions, end of period)					
Constant Fertility	19.0	22.3	26.2	31.3	37.8
Declining Fertility	19.0	21.7	24.6	27.7	31.3
Dependency Ratio (%, end of period)					
Constant Fertility	108	111	113	113	113
Declining Fertility	107	106	100	89	81

Source: Demographic tables in Annex C.

2.11 The constant fertility and declining fertility scenarios are illustrated in Table II.2. In both cases the announced Government policy of "AIDS intervention" is assumed. Under the constant fertility scenario, the population growth rate would accelerate, reflecting the passage of the AIDS epidemic, and other reductions in infant and child mortality. In this case, Uganda's population of 16.3 million in 1990 would increase by 132% to 37.8 million in 2015. Under the declining fertility scenario, on the other hand, the population would increase by 92% to 31.3 million in 2015. Thus, Uganda's population will grow rapidly in any event, but less rapidly under the declining fertility scenario.

B. Justifications for Fertility Regulation

2.12 In the Ugandan context, a number of justifications can be presented in support of public policy to make family planning services widely available:

Maternal and child health. It is well established that childbearing toward the extreme ends of women's reproductive age bracket, and also short childspacing intervals, pose risks to the health of both women and children. In recognition of these facts, the draft Three Year Health Plan (TYP) states that "Family planning is treated here is an important MCH activity, without regard to its possible role in population policies." In addition to the health risks associated with childbirth, there are also the health risks associated with abortion; 7% of young Ugandan women in a survey reported having had an abortion. 3/

Reproductive choice. Irrespective of health risks, reproductive choice "releases women's lives from regular punctuation by pregnancy, childbearing, and child care," 4/ and is therefore an important aspect of women's welfare. This justification is also accepted (implicitly) in TYP, which says that family planning services should be made available to the 52% of adult women who want them. In view of the finding that rural Ugandan women work 12-18 hours a day, with a mean of 15 hours, 5/ it is not surprising that many Ugandan women wish to have fewer children.

Poverty alleviation, at the family/household level. On the basis of studies in Brazil, Colombia, Malaysia, India, and Pakistan, it is well established that "high fertility contributes to poverty. It strains the budgets of poor families, reducing available resources to feed, educate and provide health care to children." 6/ Families with many children save less, and therefore find it more difficult to pull themselves out of poverty.

AIDS. The HIV prevalence rate among adults is estimated to be in the range 10-12%. These people should probably be encouraged and assisted not to have additional children, in view of the possibility that children would be born with neonatal AIDS, and the certainty that their children will be orphaned.

High fertility leads to rapid population growth. From the national development perspective, the current or prospective density of population may be considered excessive, and/or a high rate of population growth may be considered harmful.

3/ William K.A. Agyei and Elsbeth J. Epema, "Sexual Behavior and Contraceptive Use Among 15-24 Year Olds in Uganda", International Family Planning Perspectives, Vol. 18, March, 1992, p. 13-17.

4/ The World Bank, "Effective Family Planning Programs" (draft, 1992), p. 2.

5/ Abby J. Nalwanga-Sebina and Edith R. Natukunda, Uganda Women's Needs Assessment Survey 1988, p. 16

6/ Nancy Birdsall and Charles C. Griffin, "Fertility and Poverty in Developing Countries", Journal of Policy Modeling (1988), v. 10, pages 29-56. Also, Susan Cochrane, Valerie Kozel, and Harold Alderman, Household Consequences of High Fertility in Pakistan, World Bank Discussion Paper No. 111 (1990).

2.13 Thus, concern over rapid population growth is only one of several reasons for making effective family planning services available. The first four out of the five justifications for fertility regulation presented above are valid and important regardless of whether the population growth rate is 3%, 2%, 1%, or zero. The following section explores the "rapid population growth" justification for family planning, on the basis of the constant and declining fertility scenarios.

C. Implications of Rapid Population Growth

Impact on the Dependency Ratio

2.14 With constant fertility, the dependency ratio would increase to 113%, reflecting reduced infant and child mortality, and then stabilize at that level (Table II.1). This would probably be the highest dependency ratio in the world in the early twenty-first century. With declining fertility, the dependency ratio would decrease to 81% by 2015, making it easier for Ugandan families to invest in the "human capital" of their children, and to have financial savings (with the national savings rate shifting from negative to positive) which could be transformed into the nation's physical capital, supporting economic growth.

Overcoming Deficits in the Health and Education Sectors

2.15 At the present time, the access of the population to the formal health care system is limited; for example, UDHS found that only 39% of births were attended by a doctor, nurse, or midwife, while only 24% of toddlers were fully immunized (Chapter V). With constant fertility, the annual number of deliveries and the number of toddlers will continue to continue to grow rapidly (Table II.3), making it more difficult to overcome existing deficits in service delivery. Under the declining fertility scenario, on the other hand, by the year 2000 the health care system would be able to contend with 260,000 fewer annual deliveries, and the cohort of infants and toddlers (0-4 years) would be 500,000 less, making it much easier to provide full coverage of this MCH client group.

2.16 As discussed in Chapter IV, enrollment ratios in the education sector are strikingly low, particularly for girls. This reflects both "supply" constraints (the ability of the school system to make enough school places available), and "demand" factors (inability of poor households to take full advantage of school places potentially available, due to constraints such as fees, and the labor requirements of agricultural production and care of young children). Fertility reduction at the household level will help address the "demand" side, while slower growth of the school-age cohort will make it easier for the education system to address the "supply" shortfall. With fertility decline, the 5-14 cohort would be 1.5 million less in 2010, as compared with the constant fertility scenario. Under plausible assumptions, fertility decline would enable Universal Primary Education to be achieved a decade earlier than constant fertility (Chapter IV).

Table II.3: PROJECTED NUMBERS OF MCH CLIENTS AND SCHOOL-AGE CHILDREN
(in thousands)

	1995	2000	2005	2010	2015
Annual Deliveries					
Constant Fertility	1087	1274	1501	1791	2161
Declining Fertility	967	1013	1034	1126	1149
Difference	120	261	467	665	1012
Children 0-4					
Constant Fertility	3880	4626	5503	6624	8038
Declining Fertility	3828	4126	4390	4565	5046
Difference	52	500	1113	2059	2992
School-age children 5-14					
Constant Fertility	5498	6555	7871	9467	11481
Declining Fertility	5498	6509	7367	7964	8470
Difference	0	46	504	1503	3011

Note: Deliveries refers to annual average for the 5-year period beginning with the year at the head of the column.
Source: Annex A, Tables P.3 and P.4

Employment and Output 7/

2.17 Table II.4 shows that Uganda's labor force was about 6.2 million in 1990, with about 81% employed in agriculture, 3% in services and 16% in services. Though Table II.4 also conveys a low unemployment rate of 1.8%, this figure has limited meaning in largely rural-agricultural economies where underemployment can be quite large.

2.18 Prospects for labor force absorption and higher levels of remuneration must be linked to the prospects for the growth of output. The projected medium-term sectoral growth rates for the Ugandan economy are: agriculture, 4%; industry, 8%; services, 5%; GDP, 5% (Policy Framework Paper). While the bulk of the increment to the labor force will have to seek employment in the agricultural sector, the industrial and service sectors should, over time, increasingly become sources of productive employment. In the near future, industry can grow relatively rapidly because of the restoration of fuller capacity utilization. Over the long term, however, new investment will be needed. This, in turn, will require shifting Uganda's gross domestic savings rate from the -3% of GDP recently recorded, to at least +10% of GDP (PFP) - a challenge which would be considerably eased by fertility reduction.

7/ Employment issues are analyzed in the World Bank's 1993 Country Economic Memorandum, entitled "Uganda: Growing Out of Poverty", Chapter 6.

Table II.4: EMPLOYMENT, UNEMPLOYMENT, AND LABOR FORCE, 1990

	Thousands	Percentage of Employment
Employed Population	6127	100.0
Agriculture	4932	80.5
Industry	196	3.2
Services	999	16.3
Unemployed	114	
Labor Force	6241	

Source: Based on mission estimate of population in 1990 (on basis of January 1991 census), and percent distributions from Household Budget Survey 1989/90, Tables 2.20 and 2.25.

2.19 Although agriculture achieved a 5% growth rate between 1986 and 1990, supporting rising real wages for hired agricultural labor, this represented recovery from a depressed base. One view held in Uganda is that, because the country has considerable underexploited land, the agricultural sector has the capacity to absorb rapid growth of the population and labor force. However, when one looks at the population possibilities open to Uganda, the question of "whether" Uganda's land can absorb additional population turns out not to be very interesting, because Uganda's population will more than double between 1990 and 2020, under either the constant or the declining fertility scenario. Under the constant fertility scenario, the population would increase by 2.8 times over the 30-year period, whereas under the declining fertility scenario, it would increase by 2.2 times. A more relevant questions is therefore, under what circumstances can the additional population be absorbed without decreases in agricultural production per capita, leading to impoverishment.

2.20 In this context, one question to be explored is why population density has built up in some areas of the country, while densities are relatively low in other areas (Annex B - Population Pressures on the Land). There are a number of constraints to migration: (a) people feel safer in areas populated by their own ethnic group; (b) much of the unused land is in areas subject to tse-tse fly and malaria; (c) in new areas, there is limited access to roads, water supply, and other infrastructure.

2.21 In the existing settled areas, close to the maximum amount of land which can be farmed, while still ensuring sustained soil fertility, is already being cultivated, often in fragmented holdings. Whereas data from the 1963/64 Census of Agriculture revealed that 45% of the population lived on small farm holdings of .1 to 2.5 acres in size, the Household Budget Survey reported that the number of families living on such tiny holdings had climbed

to 62% by 1989/90, revealing an increased concentration of farm households at the lower end of the distribution of farm sizes. These households typically have low debt servicing capacity, and hence low capacity to purchase new technology.

2.22 Achieving increased agricultural production in Uganda will require land intensification, expansion of the arable land frontier through expansion into new areas, and channeling of spontaneous migration into the most productive areas. 8/ Overcoming the constraints to the absorption of additional population on the land, without impoverishment, will not be easy. This is a process which will take time, and will require savings and investment. It is therefore a process which would be facilitated by lower fertility and slower population growth.

Environmental Implications

2.23 Demographic pressures are exacerbating stress on Uganda's environment. Nowhere is this more apparent than in the loss of high tropical forest area, which has declined from more than 3 million hectares at the beginning of this century, to 1.2 million hectares by 1958, to around 700,000 today. At this rate of depletion, Uganda's high tropical forests would be eliminated within about 25 years. Uganda also has about 780,000 hectares of savannah forest which is being rapidly depleted as a source of fuelwood and building poles. Efforts to protect forest reserves have been further undermined by encroachments in the form of settlements, agricultural encroachment, pitsawing, annual bush fires and biomass-brick-making. Prior to 1971 encroachment existed but not as a threat; since then, upwards of 50,000 people have been involved, largely due to population pressures, poverty and problems of land management. 9/

2.24 The link between demographic pressures and fuelwood shortages are particularly worrisome given that woody biomass sources account for about 94% of the total energy consumed in Ugandan households, both urban and rural. Estimates of consumption of woodfuel are in the range of 8-13 million metric tons annually, whereas theoretically sustainable woody biomas yield, for all purposes, has been estimated at about 11 million tons. Yet, even the theoretical sustainable yield is not being achieved, because of poor management; forest resources inappropriate for woodfuels are being cut down for this purpose, damaging the resource base. Clearly, rapid population growth over the next 10-20 years threatens that the demand for fuelwood will exceed the sustainable yield by a substantial margin (see Box II.1). Furthermore, urbanization is likely to make the fuelwood problem more difficult by concentrating demand in localities where transport costs are likely to encourage cutting of nearby forests, especially given that only 3% of the peri-urban plantations meant to serve urban areas with woodfuel and poles are in fair condition. In addition, demand for wood for housing construction is resulting in the loss of forest cover which helps to minimize soil erosion and maintain soil fertility.

8/ World Bank, "Uganda: Agriculture Sector Memorandum", (draft, 1992).

9/ Report of the National Environmental Action Plan (NEAP) Advisory Committee, Uganda, April 7, 1992. Task Force Reports on "Land Management, Agriculture, Livestock and Rangelands", "Aquatic Biodiversity: Water Resources, Wetlands, Fisheries Resources and Irrigated Agriculture", "Energy", "Disposal of Human Body Wastes in Low Income Peri Urban Communities", "Issues Paper on Terrestrial Biodiversity", "Population and Human Settlements".

2.25 Though Uganda is well endowed with fresh water resources, increased human activities -- deforestation, poor farming practices, overgrazing, land reclamation, industrial pollution, demographic pressures -- have disturbed the equilibrium of the water cycle through increased run-off with minimal recharge to the underground and surface water reserves, thus impairing water quality. It is estimated that only 20% of the rural and 50% of the urban population have access to safe water supply within reasonable distance, a situation made worse by poorly maintained water systems during civil upheaval and unrelenting population growth. Reflecting the deterioration in governance and the economy, by 1983 only 36% of rural boreholes were functioning. At the rate of 72 boreholes a year per "borehole rig", UNICEF estimates that Uganda would require 16 rigs drilling continuously until 1999 to meet rural water supply requirements that exist now, let alone those of a population 30-40% larger. The estimated cost of such a program is $92 million, compared with $4 million funded in 1990.10/

D. Government Policy

2.26 According to the current Rehabilitation and Development Plan (September 1992):

> . . . Government is keenly aware of the importance of population factors in socio-economic development. Of particular concern is the effect of population increases on the health status and welfare of the people, especially amongst the most vulnerable groups such as mothers and children. In this regard, Government's long-term objective is to promote the health and welfare of the population by reducing the prevailing high levels of morbidity, mortality, and fertility to ensure a balance between population growth, socio-economic development and the quality of life of the people.

The RDP further states that a "national population policy" will be formulated, and that a National Population Council will be established. Population factors will be integrated into national development planning, and research on the inter-relationship between demographic and socio-economic factors will be sponsored.

2.27 At the present time, Uganda lacks an organized national family planning program, along the lines of Zimbabwe with its Zimbabwe National Family Planning Council, or Indonesia with its National Family Planning Board. In view of the urgency of the need to reduce Uganda's extraordinarily high fertility, the highest priority is for prompt action to make reproductive choice effectively available to Ugandan women.

E. Conclusions

2.28 This chapter arrives at the following broad conclusions:

> Despite the toll of AIDS, Uganda's population will grow rapidly in the years ahead, with the 1990 population being doubled by 2011 with constant fertility, or by 2016 with declining fertility. Reflecting the AIDS epidemic, Uganda is expected to have the highest dependency ratio in the world during the period 1995-2000.

10/UNICEF, Children and Women in Uganda:A Situational Analysis, (Kampala, United Nations Children's Fund, 1989).

Fertility regulation is well-justified in Uganda for a number of reasons: (a) maternal and child health; (b) reproductive choice, (c) poverty alleviation at the family/ household level; (d) the undesirability of HIV-positive people having additional children; (e) concerns related to rapid population growth. Rapid population growth is impeding efforts to address problems of reducing deficits in health and education services, coping with labor force growth, and protecting the environment.

The formulation of an organized national family planning program (the possible content of which is discussed in Chapter VI) is therefore a matter of urgency.

III. CONTEXTUAL FACTORS INFLUENCING THE DESIGN OF SOCIAL SECTOR STRATEGY

3.01 The Government's capacity to deliver social services is affected by constraints, such as the low revenue effort, the lack of an adequate system for prioritizing Government expenditure, and the lack of a "living wage" for Government employees. It is helpful to have an appreciation of these constraints, and the prospects for alleviating them, when considering how rapidly Government-provided social services can be expanded, and what roles can and should be left to the private sector. Thus, the purpose of this chapter will be to provide the macro context within which the sectoral programs will fit.

A. Low Income and Lack of Domestic Savings

3.02 Uganda's per capita GDP is only about $170 (Statistical Appendix Table FG.1). For comparison, the average GDP per capita in the low-income group is $350, although the real incomes of some of these countries are also exaggerated by currency overvaluation. Thus, Uganda, which twenty years ago was one of the most prosperous African countries, today lies toward the poorer end of the low-income group. Even if, as expected, the economy grows at a trend rate of 5% per annum, Uganda will not return to the real income levels of twenty years ago until well into the twenty-first century. Related to the low incomes, and the rapid turnover of the population which makes it difficult for households to save, Uganda is one of the handful of countries in the world with a negative savings rate (-2.7% of GDP).

3.04 The implication of the low income and lack of domestic savings is that social sector policies for the 1990s cannot be based on reconstructing the social infrastructure of twenty years ago, with little cost recovery. This would be unsustainable. Rather, social sector policies for the 1990s should be based on the recognition that social sector spending should be centered on the most cost-effective interventions, and that there should be significant cost recovery in selected areas.

B. Central Government Finance

Overview of Central Government Finance

3.05 The World Bank's Public Expenditure Review (P.E.R.) 1/ pointed out that Uganda's revenue/GDP effort was unusually low, and that this constrained the Government expenditure/GDP ratio to a low level, and also meant that the Government budget was highly dependent on external aid.

3.06 The fiscal data underlying the projections in the Government's Policy Framework Paper (PFP), are summarized in Table III.1. Government revenue has recently been only about 7% of GDP in Uganda in 1990/91, whereas, among developing countries generally, the average revenue/ GDP ratio is 17%. Government expenditure was about 15% of GDP in Uganda in 1990/91, and 17% of GDP in 1991/92, in comparison with an average of 21% for

---

1/ World Bank report no. 9203-UG, Public Choices for Private Initiatives: Prioritizing Public Expenditures for Sustainable and Equitable Grwoth in Uganda (1991)

Table III.1: CENTRAL GOVERNMENT BUDGETARY OPERATIONS, AS A PERCENT OF GDP

	1989/90 Actual	1990/91 Actual	--1991/92-- Financial Program	Actual	1992/93 Financial Program	1993/94 Projected	1994/95 Projected
Revenue and Grants	8.3	10.8	15.3	13.5	14.8	17.3	18.8
Revenue	6.9	7.2	7.2	6.6	7.3	9.8	11.6
Grants	1.4	3.7	8.1	6.9	7.6	7.5	7.3
Total Expenditure	12.7	14.4	17.3	20.6	19.4	20.6	21.5
Locally-controlled	8.6	10.1	11.4	13.0	10.4	12.1	13.0
Statutory	0.7	1.4	1.9	3.4	3.1	2.4	2.3
Ministries	8.9	8.7	9.5	9.6	7.3	9.7	10.7
Project Aid	3.1	4.3	6.0	7.6	8.9	8.6	8.6
Overall Deficit	4.3	3.6	2.0	7.1	4.6	3.3	2.7
Memorandum items:							
Total expenditure, excluding statutory	12.0	13.0	15.4	17.2	16.3	18.2	19.2
Total aid (grants and loan disbursements)	7.0	8.7	14.1	11.6	13.7	14.5	14.2
			(ratios, in percent)				
Revenue/Total expenditure	54.3	49.8	41.8	32.0	37.6	47.6	53.8
Aid/Total expenditure	54.9	60.7	81.1	56.3	70.8	70.4	65.9

Source: Statistical Appendix Table FG.2a.

developing countries generally. In recent years Government revenue has financed only about 50% of Government expenditure, while external aid has been equivalent to about 60% of Government expenditure.2/ Thus, the features pointed out by the P.E.R. two years ago - weak revenue effort and consequent high aid dependency - have remained in place.

2/ In the Ugandan context, it is possible for revenue plus aid to be greater than expenditure, because not all aid is "spent" in the Government budget. All project aid is spent. The situation with respect to nonproject aid is more complex. A portion of the shilling counterpart funds generated by nonproject "import support" aid is devoted to financing Government expenditures, while another portion is devoted to reducing the Government's indebtedness to the domestic banking system.

3.07 Implementation of the 1991/92 budget went significantly off-track, especially in the first half of the fiscal year, reflecting both underperformance on resource mobilization, and overspending, resulting in an excessive deficit. For 1992/93, a prudent fiscal policy, including restraint on locally-controlled expenditure, is being followed. Over the medium term, the Government's fiscal objectives are to substantially increase the revenue effort, devote a greater share of Government expenditure to economic and social services, and release (through deficit reduction) more resources to the banking system for the private sector. The establishment of an autonomous Revenue Authority is expected to contribute importantly to improved tax administration and an increased revenue yield.

Sectoral Distribution of Central Government Expenditure

3.08 The PER pointed out that, in comparison with other Sub-Saharan (SSA) countries, the distribution of Government expenditure was skewed toward defense, contributing to a low level of Government spending on the social sectors, particularly education. The PER additionally observed, on the basis of data available through 1989/90, that there was a chronic tendency toward overspending of the defense budget during the course of each fiscal year, making it necessary for the Government to withhold spending on economic and social services to less-than-budgeted amounts, in order to remain within the overall financial program.

Table III.2: CENTRAL GOVERNMENT EXPENDITURE BY SECTOR, AS PERCENT OF GDP

	1989/90	--1990/91--		--1991/92--		1992/93
	Actual	Budget	Actual	Budget	Actual	Budget
Locally-controlled						
Expenditure	8.91	8.47	8.75	9.49	9.62	7.34
Social Sectors	1.84	2.06	1.81	2.48	2.21	2.45
Education	1.39	1.41	1.31	1.71	1.74	1.61
Health	0.45	0.65	0.51	0.76	0.47	0.84
Defence	3.77	1.93	2.97	1.95	2.32	1.53
Other	3.31	4.48	3.96	5.06	5.09	3.36
Donor Disbursements	3.10	4.18	4.28	5.95	7.56	8.94
Social Sectors	1.08	0.52	1.87	1.73	1.73	1.47
Education	0.20	0.07	0.48	0.80	0.80	0.83
Health	0.88	0.45	1.39	0.93	0.93	0.64
Other	2.02	3.66	2.41	4.22	5.83	7.47
Total Ministerial Expend.	12.01	12.66	13.03	15.43	17.18	16.28
Social Sectors	2.92	2.58	3.69	4.21	3.94	3.92
Education	1.59	1.48	1.79	2.51	2.54	2.44
Health	1.33	1.10	1.90	1.70	1.41	1.48
Defence	3.77	1.93	2.97	1.95	2.32	1.53
Other	5.33	8.15	6.37	9.27	10.92	10.83

Source: Based on Statistical Appendix Table FG.3

3.09 As can be seen from Table III.2, the problem of overspending the defense budget recurred in 1990/91 and 1991/92 (although only to a moderate extent in the latter year). However, defense expenditure has definitely been on a downward trend - from 3.5% of GDP in 1989/90 to 2.3% of GDP in 1991/92, and a budgeted 1.5% of GDP in 1992/93. Despite the stagnation of the revenue effort, the decline in defense expenditure has enabled the Government to modestly increase locally-controlled expenditure for civilian purposes. Locally-controlled social sector spending increased from 1.8% of GDP in 1989/90 to 2.2% of GDP in 1991/92, and is budgeted to be 2.5% of GDP in 1992/93.

3.10 Although total Government social sector spending (including aid disbursements) has been on an increasing trend - from 2.9% of GDP in 1989/90 to an estimated 3.9% of GDP in 1991/92 and for 1992/93 - it has remained well below comparators. Among low-income African countries not in crisis situations, average Government expenditure on the social sectors is about 6.2% of GDP, consisting of 4.5% of GDP for education and 1.7% of GDP for health. The shortfall in relation to comparators is particularly marked for the education sector, where Uganda's Government expenditures have averaged only about half of the "norm".

Resource Envelope for Future Social Sector Spending

3.11 If, as projected in the PFP, Government revenue collection increases substantially, then it would be possible to increase Central Government expenditure, excluding interest payments, to about 19% GDP by 1994/95, and 20% of GDP by 1999/2000. Within this context, it would be reasonable to increase social sector spending to about 6.5% of GDP in 1994/95, and 7.0% of GDP in 1999/2000 (Table III.3). The bulk of this increase should go to the education sector, in view of the importance of improving quality and access at the primary level, and the possibilities for greater cost recovery and reliance on nongovernmental providers in the health sector; this would bring Uganda close to the "norm".

Table III.3: RESOURCE ENVELOPE FOR FUTURE SOCIAL SECTOR SPENDING
(percent of GDP)

	1989/90 Actual	1990/91 Actual	1991/92 Actual	1992/93 Budget	1993/94 Proj.	1994/95 Proj.	1999/2000 Proj.
Total Central Government Ministerial Expenditure	12.0	13.0	17.2	16.3	18.2	19.2	20.0
Defense	3.8	3.0	2.3	1.5	1.5	1.5	1.5
Civilian Purposes	8.2	10.0	14.9	14.8	16.7	17.7	18.5
Education	1.6	1.8	2.5	2.4	3.5	4.5	5.0
Health	1.3	1.9	1.4	1.5	2.0	2.0	2.0
Other	5.3	6.4	11.0	10.9	11.2	11.2	11.5

Government Expenditure Strategy

3.12 As indicated in the The Way Forward II (1992), the respective roles of the public and private sectors should be determined by the comparative advantage of each, and Government expenditure should be concentrated "on those activities/sectors in which Government must play a leading role . . . (while) ensuring that expenditures within priority sectors are cost-effective." The Way Forward II reiterates that "Government must be careful not to spread its scarce resources so thinly as to render Government services totally ineffective."

C. Planning and Budgeting of Central Government Expenditure

Recent Assessments

3.12 In recent years, both the Report of the Public Service Review and Reorganization Commission, and the World Bank's PER, have commented on the existing arrangements for planning and budgeting of Central Government expenditure. The PSRRC recommended that each ministry should have a three to five-year corporate plan, and that budgets should be recast in program format.

3.13 Among the observations made by the PER were the following:

> Because Section 2 (jointly-financed projects) in the Development Estimates lacked a program structure, it was difficult to identify total Government expenditure on various programs, within sectors. Objectives for programs were not specified, and input-output relationships were not analyzed. It was recommended that the Government extend the program classification of the Recurrent Estimates to the Development Estimates, and analyze unit costs or "norms" for key services.
>
> The budget review process focussed on the 47 ministries and other self-accounting agencies. No attempt was made to measure and analyze the proposed distribution of expenditure among sectors, but the Government should begin to do this.
>
> The effectiveness of the Government's development effort was diminished by the dissipation of expenditure over an excessive number of activities. The need was for the Government to concentrate on a smaller number of better-defined objectives.
>
> The Government lacked a medium-term framework for resource allocation, with the result that the entire burden of the resource allocation task was carried by an overloaded annual budgeting process. In order to address this weakness, the Government should move toward the formulation of a Medium-term Expenditure Plan (MTEP). However, such a step would be premature in the immediate future in view of weaknesses such as the lack of computerization and the lack of training. In the interim, a Public Expenditure Issues Paper, which would serve as a vehicle for consensus-building on expenditure priorities, could be prepared as a precursor of the annual budget preparation process.

3.14 As can be seen, the assessments and recommendations of the PSRRC and the PER concerning planning and budgeting were consistent. The Government has accepted the key recommendations on budgetary reform, including preparation of a medium-term expenditure plan, as is reflected in the PFP.

Implementation of Budget Reform

3.15 The Economic and Financial Management Project, approved in 1992, includes a component to support the implementation of budget reform. Budget reform will be piloted in five key ministries, including the Ministry of Education and the Ministry of Health. 3/

3.16 In March 1992, the former ministries of Planning and Finance were consolidated into a single ministry. More recently, most of the staff from the former Sectoral Planning Department and the former Budget Department have been brought together in a new Expenditure Department, which will be responsible for medium-term expenditure planning as well as the annual budget. These actions greatly improve the prospects for making progress in this area.

Situation in the Education and Health Sectors

3.17 In the education sector, the Recurrent Estimates of the Ministry of Education have a logical program format (primary, secondary, etc.), but this format has not been extended to the externally-aided projects in the Development Estimates, and the utility of the Recurrent data is diminished by the practice of displaying the Ministry's entire wage bill as a lump-sum under the Headquarters program, a practice which is inconsistent with sound budgeting principles, but which reflects the lack of an agreed Establishment.

3.18 In the health sector, the principal "program" shown for the Ministry of Health in the Government budget is the "Office of the Director of Health Services"; other programs include research, and training, while the entire wage bill is once again shown as a lump-sum under the Headquarters program. Thus, expenditures on preventive and curative services, or on specific "vertical" programs, are not readily identifiable.

3.19 An additional complication is the channelling of funds to local administrations through the Ministry of Local Government, outside the budgets of the Ministry of Education and the Ministry of Health. In sum, at present the Government's planning and budgeting system does not generate data on expenditure by program in the social sectors. The tables on expenditure by program in Chapters IV and V of this report were derived by the mission, as indicated in the Statistical Appendix.

3.20 As discussed in the following two chapters, initial documents with a medium-term focus have recently been prepared in the social sectors: the Five-Year Investment Program for the Ministry of Education, and the Three Year Health Plan. Although these documents have the same general objectives as the MTEP, they were not prepared with the MTEP concept specifically in mind. In order to move these frameworks toward the MTEP concept, enhancements would be needed in the following areas: greater clarity concerning the policy framework for the sector, particularly the relative roles of Central Government, local authorities, and nongovernmental providers of social services; the relationship between the proposed pattern of expenditure and the recent actual pattern of expenditure; the integrated consideration of investment expenditure and current expenditure; and careful consideration of employment and wage issues.

3/ For further discussion of budgetary management, see World Bank report no. 10512-UG, Uganda: Managing Public Expenditure (1992).

D. Civil Service Reform

3.21 Since education and health are both "labor-intensive" sectors, compensation which enables teachers and health workers to devote an adequate amount of time to their jobs is a critical factor in the effective delivery of the service. In recent years, the Report of the PSRRC, the Education Policy Review Commission, and the Health Manpower study have all identified grossly inadequate official compensation as a factor leading to absenteeism and other abuses. It has been universally recognized in Uganda that improvements in compensation (and also in less quantifiable aspects of personnel management and incentives) are needed to improve those social services that are provided by the Government.

Report of the PSRRC

3.22 The Report of the Public Service Review and Reorganization Commission (PSRRC), submitted in 1990, found that the Government payroll was excessive in terms of the number of payees (partly reflecting "ghost" workers, and partly reflecting unnecessary employees), but severely deficient in terms of compensation per employee. It estimated that basic salary levels were about 1% of "appropriate wage levels", but found that for a significant minority of employees, salaries were supplemented by benefits such as housing, professional allowances, and "incentives" paid by donors to civil servants working on donor-aided projects. The Report pointed out that while these incentives had contributed to improved implementation of individual projects, they resulted in serious inequities.

3.23 As a basis for considering wage policy, the Report identified four wage level concepts:

> The Minimum Living Wage (MLW) would be based on a basket of goods and services "needed to keep body and soul together."
>
> The Living Wage enhanced the MLW with other costs such as health, education, and clothing.
>
> The Appropriate Wage (Uganda average) reflected the qualifications and responsibilities of the employee.
>
> The Appropriate Wage (PTA average) reflected the notion that, for some higher skill categories, the "brain drain" would continue if compensation in Uganda remained far below compensation elsewhere in the Preferential Trading Area.

Recent Developments and Current Situation

3.24 With the Report of the PSRRC as a starting point, the Government has begun to implement a program of Civil Service Reform, as part of its structural adjustment program. Thus far, the accomplishments include a weeding out of "ghost workers" in both the Civil Service and the Teaching Service ; a reduction, through consolidation, in the number of ministries in July 1991; and an increase in salaries in July 1991.

Table III.4: WAGE AND SALARY PROJECTION 1991/92

	Total Pay Including Allowance (USh m.)	Number of Employees	Average Annual Pay (USh)	Ratio of Average Annual Pay to National Average GDP/Worker
Teaching Service	10,849	85,881	126,327	0.36
Makerere University	964	3,427	281,325	0.79
Traditional Civil Service	17,186	115,860	148,334	0.42
Defence	7,000	n.a.		
Total	36,000			-

Source of basic data: Government of Uganda, "Civil Service Reform: SAC Second Tranche Release Targets"

3.25 The Government's budgeted wage and salary bill for fiscal year 1991/92 is illustrated in Table III.4. The Government wage bill in Uganda was 1.7% of GDP in 1991/92 and is budgeted at 1.6% of GDP in 1992/93 (Statistical Appendix Table FG2a); this is far lower than in most other African countries. In Ghana, for example, the Government has made a policy decision to maintain a civil service wage bill of about 5% of GDP; in Kenya the Government wage bill is about 9% of GDP.

3.26 Even after the July 1991 wage increase, it appears that the official compensation of teachers and other civil servants is only 35-40% of average earnings among Ugandan workers, whereas ordinarily one would expect teachers and trained civil servants to have incomes higher than the national average. In Kenya, for example, the average salary of teachers and civil servants is about the average twice GDP/worker in the Kenyan economy. Thus, the pay of teachers and other civil servants in Uganda would have to be increased by a factor of about five times, in order to place them in the same position relative to other workers, as their counterparts in Kenya. An indication of the Government's assessment of the adequacy of salaries is its request that donor incentives be standardized, in a way which increases the compensation of beneficiaries to levels which are eleven to fifteen times the basic salary (Statistical Appendix Table FG.4).

Future Action

3.27 As part of its structural adjustment program, the Government has committed itself to determine the MLW, formulate a projection of the level of funds available for salary enhancement over the next three years, and develop a proposal for the monetization of benefits. Although the original target date of March 1992 for completing these steps was not met, work on these issues is currently underway.

E. Decentralization

3.28 The Government has decided to implement a Decentralization program, in order to contribute toward democratization and improve public sector performance. In particular, the following decisions were announced in October 1992:

> All ministries with field officers will be required to second their officers to the District Resistance Council (District government), so that Central Government departments operating at district levels become constituent units of the DRC, and will operate under the control and supervision of the District Executive Secretary (DES). The ministry headquarters will cease to have direct control over the personnel management functions. The DES will have responsibility for their performance and shall provide managerial direction.
>
> Starting with the 1993/94 financial year, district votes will be created in the national budget so that all recurrent expenditure for all field-based ministries will be sent to the district directly. The DES will become the District accounting officer while the DRC will become the main budgetary unit in the district.
>
> There will be a considerable reduction in ministry headquarters staff to a small core of policymakers, planners, and inspectors.

These decisions will have major implications for the delivery of Government-provided social services in Uganda.

F. Relative Roles of Private and Governmental Expenditures and Providers in the Education and Health Sectors

Relative Roles of Private and Governmental Expenditures

3.29 Earlier in this chapter, the level of Central Government expenditure on social services was discussed. However, the Government budget is not the only, or even (in Uganda) the predominant source of expenditure on social services.

3.30 As illustrated in Table III.5, in 1989/90 private expenditures outweighed Government expenditures on both education and health. The predominant share of private expenditure on health services is a natural reflection of the manner in which most health services are produced and consumed, and is consistent with the pattern of other countries. The predominant share of private expenditure in the education sector, on the other hand, is an anomaly; in Kenya, for example, private expenditures are only one-third of total spending on education, and this is typical. Another striking feature is that Government's share of the financing of education increases at higher levels of the educational ladder. Clearly, in formulating its policies for Government expenditure on social services, the Government should take into account both current, and desirable (which may not be the same thing) patterns of private expenditure.

Table III.5: PRIVATE AND GOVERNMENT EXPENDITURES ON EDUCATION AND HEALTH, 1989/90

	Percentage of GDP	Private/ Total
EDUCATION		
Private Expenditures	2.1	
Primary	1.9	
Secondary	0.2	
Higher	0.0	
Government Expenditures	1.6	
Primary	0.6	
Secondary	0.2	
Teacher Training	0.2	
Higher	0.2	
Other	0.4	
Total	3.7	57%
Primary	2.5	76%
Secondary	0.4	50%
Teacher Training	0.2	0%
Higher	0.2	0%
Other	0.3	0%
HEALTH		
Private Expenditures	1.8	
Personal - Curative	1.6	
Personal - Preventive	0.2	
Government Expenditures	1.3	
Personal - Curative	1.0	
Personal - Preventive	0.1	
Community interventions	0.1	
Other	0.1	
Total	3.1	55%
Personal - Curative	2.6	62%
Personal - Preventive	0.3	65%
Community interventions	0.1	0%
Other	0.1	0%
SOCIAL SECTORS - TOTAL	6.8	56%
Private Expenditures	3.9	
Government Expenditures	2.9	

Sources: Government expenditure from fiscal tables in Statistical Appendix. Private expenditures are based on Household Budget Survey, 1989/90. HBS did not actually collect data as classifed above. Education expenditures were classified among textbooks, uniforms, "school, college, and university fees", etc., and were not differentiated by level. The data for education above are mission estimates based on the fact that university education was completely free to students in 1989/90; 90% of the total of primary and secondary enrollment is at the primary level; and the statement in the Ministry of Education's Five Year Investment Program that "Parents are believed to be contributing 90% of the full costs of primary education and 25% of secondary education." (90% cannot be correct for the country as a whole.) HBS classified health expenditures among medicines, doctors' fees, and hospital fees. The disaggregation above of private health expenditures is a mission "guesstimate".

Relative Roles of Private and Governmental Providers

3.31 The issue of providers is related to the issue of expenditures, but these two issues are not identical, since private payments may be made to Governmental providers, and conversely. The existence of a social need does not necessarily mean that Government should meet that need, because Government's financial and managerial resources are limited, and there are some social services that the private sector can provide at least as efficiently as the Government. Examples include private sector provision of curative health services, vocational training, and (recently) higher education. The Government will have to consider the current and desirable roles of private sector providers, as discussed in the following chapters.

IV. THE EDUCATION SECTOR

4.01 This chapter does not attempt to equally address all levels of the education system. Rather, the main purposes are: (a) to provide readers with a "road map" of education sector issues in Uganda; and (b) to analyze in some detail issues relating to primary education, which is the foundation of the system, and which provides literacy and numeracy which are important for other sectors such as health, family planning, and agriculture. In addition, the university level is discussed on the basis of a recent, separate report on this subject. There is relatively little discussion of secondary education and vocational/technical education, which have been less studied. These parts of the education system will be studied under the forthcoming IDA Education V project.

4.02 In dealing with the data in this sector, caution should be exercised. Annual school surveys were re-instituted in 1989, but the raw data provided by school heads is not verified by the District Education Officer (DEO), Inspectors, or Ministry of Education headquarters staff. School heads tend to exploit the situation (sometimes with the knowledge of the DEO) by inflating school enrollments, and creating "ghost teachers", in order to get higher capitation grants and additional salary payments. The numbers in the sector should therefore be interpreted as representing orders of magnitude and general trends.

4.03 As was pointed out in Chapter I, female education is critically important for the development of human resources in Uganda. The main points concerning female participation are made below in the discussion of levels of the education system, while these issues are discussed in greater detail in Annex C.

A. Primary Education

Enrollment

4.04 Primary education has expanded rapidly over the past decade. Between 1980 and 1990, the number of primary schools increased by 89%, and the number of students increased by 85%. The number of primary teachers more than doubled from about 34,000 in 1980, to about 79,000 in 1992.

4.05 Primary enrollments and enrollment ratios in 1990, by grade, are illustrated in Table IV.1. Although most Ugandan children enter primary school, enrollment drops off strikingly from P1 to P7, and by P7 the gross enrollment ratio is only 48% for boys, and 29% for girls.

4.06 There is little empirical information as to why children are not in school. The explanation most commonly put forward is fees. For example, the Ministry of Education has stated that, due to the decline in the real value of Government financing during the long years of economic deterioration, the burden of financing primary schooling had shifted heavily to parents, with the result of "the lower income group either not enrolling, or withdrawing children from school when the financial burden becomes too great." 1/ The poor learning conditions in the schools are undoubtedly another factor discouraging school attendance. In the Integrated Survey being carried out in 1992, parents were asked why out-of-school children are not in school; this information should become available in 1993.

1/ Ministry of Education, Five Year Investment Program (June, 1991), p. 12.

Table IV.1: PRIMARY ENROLLMENT AND ENROLLMENT RATIO, BY GRADE AND GENDER, 1990

	Enrollment (thousands)	Age group 6-12 (thousands)	Gross Enrollment Ratio
Boys	1317	1632	81%
P1	314	258	122%
P2	237	249	95%
P3	217	241	90%
P4	177	233	76%
P5	147	224	66%
P6	122	217	56%
P7	103	210	49%
Girls	1050	1659	63%
P1	269	263	102%
P2	196	254	77%
P3	177	245	72%
P4	141	236	60%
P5	114	227	50%
P6	91	220	41%
P7	63	214	29%
Total	2367	3291	72%

Source: Enrollment data from Statistical Appendix Table E.2; mission estimates of population by age, based on life table used in demographic projections.

4.07 Girls' enrollment may be lower, because, from the parents' perspective, the private economic return to girls' schooling may be lower, and the opportunity costs higher, than for boys. Parents have a stronger desire to educate sons rather than daughters, partly because sons have better employment opportunities and are expected to support parents as they get older. Among a sample of Ugandan women surveyed in 1988, 64% reported that they did not finish or go beyond primary level due to lack of school fees, while 8% discontinued their schooling due to pregnancy. Rural women reported working days varying between 12 and 18 hours, with a mean of 15 hours. 2/ Under these circumstances, it is reasonable to believe that rural women value the time that daughters can devote to out-of-school tasks such as collecting firewood, fetching water, agricultural activities, and child care, particularly if the mothers become pregnant. Among the regions, the "gender gap" is greater in poorer regions (Statistical Appendix Table E.1), and in regions where the percentage of female teachers is lower.

2/ Abby J. Nalwanga-Sebina and Edith R. Natukunda, Uganda Women's Needs Assessment Survey 1988, p. 16.

4.08 Variations in enrollment ratios among Uganda's districts and regions, on the basis of the 1989 and 1990 school censuses, are illustrated in Statistical Appendix Table E.1.B. The data indicate that, in Uganda as a whole, enrollment increased by about 3% from 1989 to 1990, but that some districts and regions showed substantial increases, while others displayed declines. There was a substantial increase in the enrollment ratio in the Northern Region, which is consistent with the recent pacification of that part of the country. However, in some cases the magnitudes of enrollment increases and decreases are implausible, and possibly may reflect changes in the degree of misreporting. The 1990 data indicate that the relatively poorer Northern and Eastern regions have the highest enrollment ratios, which seems improbable.

Primary Teachers

4.09 According to the MOES census of schools, in 1990 there were about 84,000 primary teachers in Uganda; however, a Teaching Service census in 1992 by the Establishment and Staffing Control Systems Project enumerated about 79,000 primary teachers. The Teaching Service census has been accepted as the basis for the Teaching Service payroll for 1992/93, resulting in the elimination of "ghost teachers" from the payroll. In order to maintain an up-to-date and accurate record of the number of teachers, District Establishment Registers in which each post has a unique post control number are being developed, and a Teaching Service staff register in which each person has a unique staff number will also be developed.

4.10 With primary enrollment of about 2.4 million, the student/teacher ratio at the primary level as about 30:1, on average. Variations among districts in the student/teacher ratio are not very striking.

4.11 Only 61% of primary teachers are recognized as trained. Trained teachers are unevenly distributed; in Kampala, almost all teachers are trained, whereas in some districts most of the teachers are untrained. Even those teachers recognized as "trained" are not well trained. Pre-service trainees enter Primary Teacher Training Colleges (PTCs) after completing four years of secondary education ("O level"), and often have a weak general education preparation. The number of PTCs, most of them founded by religious institutions, increased from 31 in 1980 to 94 in 1988, without any planning or adequate budgetary provision. Many of the new PTCs were established in facilities built for primary or secondary schools. Tutors in TTCs are all "de facto" part-time, with most carrying out other income generating activities. The content of teacher training is overly academic, while practice teaching is brief and poorly supervised. In 1989 the Government reduced the TTC population from 94 to 69 as most of them were operating at approximately one third their capacity and uneconomic. In addition to the weaknesses of pre-service training, there is almost no in-service training.

4.12 As noted in Chapter III, teacher's salaries paid by the Government are well below livelihoods elsewhere in the Ugandan economy, and are below a minimum wage. It is therefore necessary for headmasters to supplement teachers' official salaries with PTA funds. Different communities, and different households within communities, have different capacities to afford PTA fees. The extremely low level of Government financing for primary education therefore leads to inequity in access to primary education. The Report of the PSRRC found that the deplorably low teachers' salaries led to abuses, such as teachers teaching at more than one school, leaving pupils to work on their own, and watering down regular classroom teaching in order to encourage attendance at private tutoring sessions. It found that:

> On the other hand, the conscientious teacher, without extra-mural income, finds it difficult to make ends meet; and he either has to resign himself to a pathetic life in society, or leaves for greener pastures . . . Ultimately, national development will be the main casualty of the present failure to find an adequate and timely solution for the problems now besetting the Teaching Service.

Instructional Materials and Curriculum

4.13 Teacher guides are in short supply and those available belong to an outdated curriculum. There is an acute shortage of textbooks although books were distributed through the 3rd and 4th IDA (1 set of books to six pupils). About 15 percent of the primary schools reported having a library in the 1989 census, but most of these schools do not have any books in the library. Teaching equipment and materials, particularly in the sciences is non-existent. The learning process is therefore reduced to the accumulation of factual knowledge through rote memorization or copying facts from the blackboard.

4.14 There are currently eight subjects offered in the primary curriculum (Statistical Appendix Table E.7). The National Curriculum Development Centre (NCDC) has the task of outlining the goals and objectives of education in line with national goals, and is also responsible for carrying out research and evaluation of curriculum. The NCDC lacks the necessary qualified staff, material and financial resources to carry out any of these responsibilities. It also lacks coordination between the Inspectorate and the Uganda National Examinations Board (UNEB).

Supervision

4.15 The Inspectorate has been ineffective in ensuring that teachers perform their duties satisfactorily. Fewer than 40 percent of the established posts at headquarters level and district level are filled. There is a high turnover of staff because, unlike teachers, inspectors do not benefit from PTA levies and are constantly seeking alternative means to earn a living. In the crucial subjects such as English, mathematics and the sciences, there are no subject inspectors either at headquarters or in the field (Dec. 1991).

School Buildings and Facilities

4.16 Determining the condition of school buildings and facilities by use of questionnaires is subject to uncertainty, because a mud-and-wattle structure considered to be temporary by architects may be termed permanent by school head teachers in the rural areas. The following information is available:

> The 1989 school census found that, nationwide, only 42% of classrooms were in "permanent" structures. This percentage was 95% in Kampala, and in the range 15-70% in districts outside Kampala (Statistical Appendix Table E.5).
>
> A survey on the condition of primary school buildings in Kapchorwa, Mbale, and Tororo districts was conducted in 1990. Head teachers were trained on the terminology used and on the filling the questionnaire. This survey indicated that only 9% of the classrooms were of good construction and in good condition, while 45% of the classes were held in the open.

A survey by the Northern Uganda Reconstruction Program (NURP) in 1991 found that 43% of classes were held in the open, and that, among the structures, 4% were in good condition, 23% needed minor repair, and 73% were badly damaged.

4.17 During the 1980s, good established primary schools were upgraded into PTCs and other institutions , forcing these primary schools into temporary structures. Construction of primary schools has been left entirely to parents and communities without any guidelines from relevant Government departments. The quality and design of schools therefore varies according to the resources of the communities. Furniture also varies among schools, depending on the ability of the community to provide desks and chairs.

Financing of Primary Education

4.18 Recent trends in Government financing of primary education, together with a "snapshot" of private financing in 1989/90, estimated on the basis of the Household Budget Survey, are illustrated in Table IV.2. Local authority financing of education is nonexistent in most localities.

4.19 As can be seen, Central Government financing of primary education is on an increasing trend, reaching 1.3% of GDP in the 1992/93 budget. However, it remains far below levels found in other African countries; in Kenya, for example, Central Government recurrent expenditure on primary education is 4.9% of GDP.

4.20 Reflecting a legacy of the colonial and early independence period, when the current ministries of Education, Health, and Local Government were all parts of a single ministry, there are two ministries through which Central Government Recurrent expenditure is channeled to the District Education Officer (DEO), and thence to primary school headmasters: the Ministry of Education, which employs the teachers; and the Ministry of Local Government, through which a "capitation grant" is provided to the schools. In principle, the capitation grant is intended for purchase of school supplies, but there is no accounting as to how this money is actually spent. The distribution of Central Government Recurrent expenditure among districts, per student, is quite level (Statistical Appendix Table E.6).

4.21 The largest single element in Central Government Development expenditure on primary in recent years has been the provision of surplus food commodities in poor districts by the World Food Program. Other activities under the Development budget include IDA IV, and health education and population education supported by UNICEF and UNFPA, and provision of construction materials for primary schools, such as galvanized iron sheets, under PAPSCA (Statistical Appendix Table FE.5).

4.22 Primary education would collapse if it were not for the contribution of parents, which amount to 65-90% of the total funding required by the school. These contributions are of two types: "tuition" which is set by the Government, and is equivalent in magnitude to the "capitation grant" provided through MOLG; and Parent-Teacher Association (PTA) fees set by the headmaster and the School Management Committee. These funds vary depending on whether the school is located in an urban or rural area, and on the socio-economic background of the parents. PTA fees range from USh 5000 to UShs 50,000 a term, and are used for various activities such as paying teaching and non-teaching staff additional salaries and benefits, school construction, books, stationery, and meals in boarding schools. In principle, PTA audit reports should be sent to the DEO and MOE headquarters, but this requirement is not well enforced.

Table IV.2: FINANCING OF PRIMARY EDUCATION
(% of GDP)

	1989/90	--1990/91--		1991/92	1992/93
	Actual	Budget	Actual	Budget	Budget
Central Government expenditure	0.6	0.5	0.6	1.1	1.3
Private household expenditure	1.9		n.a.		
Total	2.5				

Sources: Government expenditure is from Table IV.3, which is based on Statistical Appendix Table FE.6. Private household expenditure is based on the HBS 1989/90, as explained in the footnote to Table III.5.

4.23 Teachers' supplements depend upon the amount of money the PTA collects. Teachers can receive additional payments from U.Shs. 3,500 to U.Shs. 30,000 a month; housing can vary in quality from a dormitory to a cottage, and benefits can include land for cultivation. The variations in the amount levied through the PTA result in wide variations in the quality of education.

B. Secondary Education

4.24 Secondary education consists of six years. The first four years, S1 to S4, are known as lower secondary after which students sit for the Uganda Certificate of Education (UCE) or 'O' Level Examination. Those who pass this highly selective examination are admitted to the last two years of secondary which are known as upper secondary. University entrance is dependent on students obtaining a high mark at the end of S6 when they sit for the Uganda Advanced Certificate of Education (UACE). Some secondary schools receive both staff salaries and capitation grants from the Central Government budget, while others receive only salaries.

Enrollments

4.25 Over the past decade, secondary education has expanded very rapidly: the number of schools increased by 466%, students by 244%, and teachers by 363%. In 1990, there were about 250,000 secondary students, attending 510 Government-aided secondary schools, and 334 registered private schools. The percentage of girls' enrollment to total enrollment decreases from 40% in S1 to 26% in S6, and is 37% for secondary enrollment as a whole. The Gross Enrollment Ratio of the relevant age group is about 16% for S1-S4, and only 3.3% for S5 and S6 (Statistical Appendix Table E.9).

Secondary Teachers

4.26 There were about 14,800 secondary school teachers in 1990, of whom 10,700 were full time (Statistical Appendix Table E.10). In 1989, about 35% of secondary teachers were untrained, ranging from 14% in Kampala to 67% in Moroto.

4.27 There are three types of institutions that train secondary school teachers: (a) The ten National Teachers Colleges (NTCs) admit students for a two- year course, after which they obtain a certificate allowing them to teach S1 and S2 classes; (b) The School of Education at Makerere University admits students for a three-year course and graduate with a Bachelor of Education degree, and can then teach S3 to S6 classes. (c) The Institute of Education, Kyambogo (ITEK) offers both NTC-type certificates, and a Bachelor of Education program. Secondary teacher training institutions suffer from physical facilities that are in disarray, tutor absenteeism, a lack of learning materials and poorly equipped libraries. The proportion of women students to the total enrollment is about 30 percent.

4.28 Secondary school teachers, like their primary counterparts, are underpaid and demoralized. They are dependent likewise on PTA levies and private tutoring to supplement their official salaries. Schools with relatively well-off parents, through superior benefits, are able to attract full-time teachers with satisfactory academic backgrounds. Continuity and dedication that arise from employing full time teachers cannot be underestimated. Full-time teachers can follow up progress of individual students, have time for preparation of classes and assessment and are more responsible for the performance of their students. Teachers in poorer schools typically have to teach in other schools as well, or have non-teaching sources of income.

Curriculum and Instructional Materials

4.29 There are far too many subjects in the lower secondary school curriculum for each to be covered adequately (Statistical Appendix Table E.12). In 1989, about 45 percent of the Government aided schools had science laboratories, but most of these are in disrepair and in need of equipment; 10 percent had workshops which lack functioning equipment and 35 percent had libraries which lack books. Instruction is therefore quite theoretical. Topics covered are geared towards passing the UCE examination. Each subject curriculum needs major revision, the science curriculum most urgently.

School Buildings and Facilities

4.30 Of the 510 Government aided secondary schools, 400 were founded during the 1980s. Some of these were started in primary schools and have been termed 'developing schools'. Over 30 percent of the developing schools have no permanent buildings nor proper laboratories, workshops or library. The administration, staff room and staff housing is also minimal. The rest of the 1980s schools generally have inadequate facilities, such as science laboratories, even though about 70 percent of the facilities are of permanent material. Most of the pre-1980 schools have properly constructed classrooms, laboratories, libraries, and residential units but they do require repair and renovation. Lack of regular maintenance, damage and theft (an electric light fitting is equivalent to a year's school fees) make repair necessary. Some of the well established pre-1980 schools run by religious foundations have managed to keep their facilities in fairly good condition. Since the completion of the 1st IDA Project in the early 1970s, involving some 39 schools, there has been no major investment in secondary school facilities.

Financing of Secondary Education

4.31 Secondary education receives between 7 percent and 13 percent of the Government education budget. Most of the budget, 72 percent, is allocated to food, board and travel. Only 27 percent is spent on teachers' salaries, whereas in most SSA countries, 50-60% of the budget is spent on teachers' salaries. Government financing must be substantially supplemented by parents through the PTA. The PTA charges range from USh 2,000 to 50,000 per term. Reported estimates, probably reflecting very small samples, of the share of total school funds coming from parents range from 25%, to 70% for elite day schools, and 90% for elite boarding schools. The variations in the PTA contributions, as has been pointed out for primary education above, have serious consequences for equity and for the provision of education quality in terms of qualified teachers, facilities, textbooks, learning materials and equipment.

4.32 The Government is unable to allocate more than a minimal amount of funds towards construction and maintenance of Government fully-aided schools. It is evident therefore that the enormous amount of capital required for development of school facilities will have to be left to parents. However this presents a problem. Many secondary schools, unlike most primary schools, do not have a specific constituency because their cachement area for students is regional and even national.

C. University Education 3/

4.33 For many decades, Makerere University was Uganda's only university. In recent years, three additional universities, which are still very small, have been organized: a second public university, Mbarara University of Science and Technology in western Uganda: the private Islamic University (sponsored by the Islamic Conference, an international organization); and the private Uganda Martyrs University, sponsored by the Catholic Church. The private universities offer degrees mainly in fields where the costs of instruction are reactively low, such as education, business, nursing, and religious studies. In 1991, Makerere accounted for 98% of public university enrollment, and 95% of total university enrollment.

Makerere University

4.34 Makerere University offers degrees in liberal arts and sciences, engineering, law, medicine, agriculture, commerce, and a few other fields. In 1990/91, it enrolled about 5900 undergraduates and 700 graduate students. The ratio of students to academic staff is 8:1.

4.35 At the present time, students are charged neither for tuition, nor for accommodation and boarding costs, which are carried on the University's budget. As a first step towards cost-sharing, stationery, travelling, and personal allowances paid by the University to students were abolished in 1989. Thus, the University is completely dependent on Government budgetary funding. For 1991/92, the University's budget request was for USh 13.2 billion, whereas the amount approved was USh 6.2 billion (0.3% of GDP).

3/ This section draws upon a paper prepared by Thomas Eisemon and others, entitled "Strengthening Uganda's Policy Environment for Investing in University Development" (January, 1993).

4.36 Staff pay absorbs only 40% of Makerere's budget, whereas in most countries staff pay amounts to 65-75% of the cost of operating a university. Low pay contributes to high vacancy and attrition rates among the academic staff. Only 27% of the faculty holds doctorates, and the output of professional papers is small. Lecturers typically teach only three classes a week, which are scheduled early in the morning to enable them hold other jobs in the Kampala area. The chief attraction of University employment is the housing made available at negligible rents.

4.37 Following the restoration of peace in the country in 1986, a number of donors have initiated assistance to particular facilities at Makerere: Faculty of Agriculture and Forestry (USAID); Faculty of Science facilities (Japan); Faculty of Technology (Italy); Faculty of Veterinary Medicine (Germany); selected infrastructure works (European Community). These targeted investments have produced uneven development of the University's infrastructure, which cannot be sustained under current arrangements. They have taken place in the absence of any long term academic, physical, or financial planning for the University as a whole.

Table IV.3: CENTRAL GOVERNMENT EXPENDITURE IN THE EDUCATION SECTOR, AS A PERCENTAGE OF GDP

	1989/90	--1990/91--		1991/92	1992/93
	Actual	Budget	Actual	Budget	Budget
Locally-controlled					
Expenditure	1.39	1.41	1.31	1.71	1.61
Primary education	0.41	0.48	0.36	0.71	0.76
Secondary education	0.23	0.24	0.21	0.18	0.19
Teacher training	0.19	0.16	0.16	0.13	0.13
Tech. & commercial ed.	0.13	0.11	0.09	0.09	0.09
Higher education	0.25	0.28	0.28	0.36	0.32
Other	0.18	0.15	0.20	0.24	0.12
Donor Disbursements	0.20	0.07	0.48	0.80	0.83
Primary education	0.17	0.06	0.29	0.38	0.52
Secondary education	0.00	0.00	0.00	0.00	0.00
Teacher training	0.00	0.00	0.00	0.06	0.14
Tech. & commercial ed.	0.00	0.00	0.00	0.07	0.05
Higher education	0.03	0.01	0.19	0.29	0.12
Other	0.00	0.00	0.00	0.00	0.00
Total Central Government					
Expenditure	1.59	1.48	1.78	2.51	2.44
Primary education	0.58	0.54	0.65	1.09	1.28
Secondary education	0.23	0.24	0.21	0.18	0.19
Teacher training	0.19	0.16	0.16	0.20	0.27
Tech. & commercial ed.	0.13	0.11	0.09	0.16	0.14
Higher education	0.28	0.29	0.48	0.65	0.45
Other	0.18	0.15	0.20	0.24	0.12

Source: Based on Statistical Appendix Table FE.6

4.38 Following both student unrest, and strikes by academic and non-academic staff, a Makerere University Visitation Committee received submissions, and submitted a Report in 1991. The Committee found the academic program, particularly in arts and sciences, was too relaxed, with some students having only one class a day, typically early in the morning, with lecturers commonly failing to appear. The University library lacked necessary books, periodicals, and seating capacity, and was in poor and unsanitary condition. There was a lack of equipment and chemicals for scientific courses. The halls of residence accommodated far more students than their designed capacities, and were in unsanitary condition due to lack of maintenance. The Visitation Committee found that "The most serious problem, from which numerous others stem, is the inadequate funding of the University." (Policy measures to address this problem are discussed in section E below.)

D. Financing and Management of the System as a Whole

Financing of the System as a Whole

4.39 As can be seen from Table IV.3, Central Government spending on education has recently been on an increasing trend. Locally-controlled expenditure, which was 1.4% of GDP in 1989/90, is budgeted to be 1.6% of GDP in 1992/92. The increase in locally-controlled expenditure has been directed to the primary level; secondary's share of locally-controlled expenditure (Percent Distribution in Statistical Appendix Table FE.6a) has gone down, reflecting the discontinuation of budgetary support for boarding and feeding. Donor disbursements in the education sector have increased from 0.2% of GDP in 1989/90 to 0.5% of GDP in 1990/91, and a budgeted 0.8% of GDP in 1992/93.

4.40 Despite the recent trend of an increasing budget for education, Government spending on education in Uganda remains far below levels found in other African countries (5% of GDP is about average).

Table IV.4 : Central Government Recurrent Expenditure Per Student, By Level.

LEVEL	1989 / 1990	1990 / 1991	1991 / 1992
Primary	2,128	2,437	6,153
Secondary	10,873	15,289	16,320
Teacher Education	138,421	142,823	155,471
University	458,269	548,000	967,077
RATIO (TO PRIMARY)			
Primary	1	1	1
Secondary	5	6	3
Teacher Education	65	59	25
University	215	225	157

Source : Table FE.1 Recurrent Expenditure

4.41 Data on Central Government Recurrent expenditure per student (Table IV.4) show that the distribution of subsidies is skewed toward beneficiaries at the higher levels of the system. Reflecting the increased expenditure on primary education in the 1991/92 budget, the ratio of Government spending per student among university, secondary, and primary students moved from 225:6:1 in 1990/91, to 157:3:1 in 1991/92.

Management of the Education Sector

4.42 Because of decline in the real value of Central Government financing over the past two decades and the deterioration of the central administration, control of individual schools has been effectively relinquished to the headteachers, School Management Committees at primary schools and Boards of Governors at secondary schools, and PTAs. However, headteachers are generally lacking in administrative or management skills.

4.43 At the district level, the District Education Officer (DEO) is the key official. Every month the DEO receives a check from MOE, which he cashes in order to meet the payroll in his district. At the beginning of each term he also receives a check from MOLG for school supplies. Every month the headteachers go the DEO's office to collect cash for salaries, and school supplies; hand in any reports; and receive communications from headquarters.

4.44 In addition to the "line" administrative structure of DEOs, etc., the Ministry of Education also includes specialized "staff" functions, such as policy analysis, inspection, curriculum, and examinations. Reflecting such factors as the deterioration in recordkeeping, and lack of funds for transportation, both line and staff functions have been performed poorly in recent years.

4.45 Under the Decentralization program, all ministries with field staff, such as Education will be required to second their staff to the District Resistance Council (district government); these staff will operate under the control and supervision of the District Executive Secretary (DES). Starting with the 1993/94 financial year, district votes will be created in the national budget so that all recurrent expenditure for all filed-based ministries will be sent to the district directly. The DES will become the District accounting officer while the DRC will become the main budgetary unit in the district. The implication of these decisions is that, in the future, the DEO will report primarily to the district government, and only secondarily to the Ministry of Education.

4.46 The decentralization of "line" functions should enable the Ministry of Education headquarters to concentrate more effectively on key strategic functions such as policy analysis, curriculum, and examinations.

E. Policy Framework for the Education Sector

4.47 The issues identified in the previous sections of this chapter have all been well recognized in Uganda. This section describes the Government's policy response to the challenges that have been identified, and provides some assessment and commentary on the Government's strategy.

Report of the Education Policy Review Commission (EPRC), and the Draft White Paper

4.48 In 1987, the Government established the Education Policy Review Commission (EPRC) to report on the state of education, and make recommendations for its rehabilitation. The Commission issued its Report in 1989. A draft Government White Paper on Implementation of the Recommendations of the Report of the Education Policy Review Commission was issued for public discussion and debate in 1992, prior to eventual adoption. The stances taken on major issues are as follows:

> On the structure of the system of the system, EPRC recommended that primary should be extended by one year, and lower secondary reduced by one year, thus changing the pre-tertiary structure form 7-4-2 to 8-3-2. The draft White Paper endorses this change, on the justification of allowing for increased teaching of vocational subjects.
>
> EPRC recommended the abolition of tuition fees in grades P1 through P4 from 1991 onwards, and in grades P5 and P6 from 1995 onwards. The draft WP advocates abolishing primary tuition at a rate of one level a year, beginning 1992/93 and to be completed 1999/2000.
>
> EPRC recommended that universal primary education (UPE) be achieved by the year 2000 for children aged 6-10 (the first five years), and for the entire primary cycle by the year 2010. The draft WP sets a target of achieving UPE no later than 2001/02.
>
> EPRC recommended that adequate facilities for girls be provided in coeducational post-primary institutions to allow for balanced enrollment, and that, in coeducational schools, either the Head or Deputy Head should be a woman. The draft White Paper endorses these recommendations, and additionally states that "accelerated registration and training of female teachers, tutors, and lecturers will be undertaken."
>
> EPRC identified the vocationalization of education, through pre-vocational courses in upper primary school and vocational courses in secondary school, as one of its "major thrusts." The draft White Paper endorses that "schooling will henceforth be strongly oriented towards vocational preparation." In particular, the entire primary cycle would be vocationalized at all levels, and all secondary institutions would eventually become comprehensive secondary schools.
>
> Concerning language policy, EPRC recommended that the local indigenous language should be the medium of instruction through the P4 grade, with English serving as the medium of instruction from P5 onwards (this is the existing practice). The draft White Paper endorses this, with the modification that in urban areas English could be used as the medium of instruction beginning with P1. The White Paper additionally recommends that Kiswahili be made a compulsory subject throughout the primary and

secondary cycles, to be given equal weight with English and mathematics in the Primary Leaving Examination.4/

EPRC stated that attention should be devoted to expanding university education, by establishing two new national universities in northern and eastern Uganda, "in due course when necessary resources are available." It recommended the creation of a National Council for Higher Education to formulate policies and coordinate the universities. The draft White Paper endorses these recommendations.

Concerning expenditure and finance, EPRC recommended that the Government allocate at least 20% of its recurrent budget to the education sector, with allocations to non-pedagogical purposes such as boarding to be discontinued. EPRC recommended that local governments "raise resources for education through taxation within their powers." The draft White Paper notes that "it is envisaged that the revenue performance will increase form 8% of GDP in 1989/90 to 16-20% of GDP in the near future", and states that, while more funds will be allocated for educational development, "it is not possible to commit Government to any definite position on the percentage of the national budget to be spent on education."

4.49 A clear summary statement of the Government's strategy is found in the Background to the Budget 1991-92: "The focus for the new decade and beyond will be primary education, in terms of both universal access and high quality . . . This entails shifting resources from secondary and tertiary institutions, particularly where they are being used for non-instructional subsidies, towards the primary level."

Report of the Makerere University Visitation Committee

4.50 Another relevant policy document is the Report of the Makerere University Visitation Committee, which recognized that institutional and policy reforms would be needed in order to bring about a sustainable revitalization of Makerere. The Visitation Committee made the following recommendations, which presently are under consideration by the Government:

The student body should be divided into two shifts, each of which would study for three months and then go on leave for three months, until earning their degrees. This would alleviate the present serious overcrowding, and enable the University's facilities to be utilized throughout the year.

A loan scheme to cover either full or partial tuition should be put into place.

There was a need for a "vast improvement in the terms and conditions of service of the academic staff".

The governance of the University should be reformed by, among other steps, appointing a Chancellor other than the President of Uganda, and restructuring the composition of the University Council with greater University representation and less Government representation.

4/ Unlike in Tanzania and parts of Kenya, Kiswahili is not a native language in Uganda. According to EPRC, there are five main area languages: Luganda, Lwo, Runyakitara, Ateso/Akaramojong, and Lugbara.

Assessment

4.51 The Government's focus on the objective of universal primary education is entirely appropriate, in view of the well-established linkages between primary education and development:

> Primary education has direct and positive effects on earnings, farm productivity, and human fertility, as well as intergenerational effects on child health, nutrition, and education . . . Investments in primary education yield returns that are typically well above the opportunity cost of capital. One study showed that four years of education increased small-farm productivity by 7% across thirteen developing countries and by 10% in countries where new agricultural techniques were being introduced. The social effects of education in developing countries are also positive. Women with more than four years of education have 30% fewer children than women with no education, and their children have mortality rates only half as high."5/

These cross-country findings on the social benefits of female education are supported, as noted in Chapter I, by the evidence from Uganda.

4.52 It should be pointed out, however, that the objective is learning rather than mere enrollment. This necessitates meeting at least minimum requirements for trained teachers and instructional materials.

4.53 The Government's strategy of moving toward the objective of UPE by shifting the distribution of Central Government education expenditure relatively toward primary away from secondary and tertiary, while shifting the distribution of parental/beneficiary expenditure away from primary, toward secondary and tertiary, is also entirely appropriate. 6/

4.54 Given the appropriateness of this direction, the relevant question then becomes the magnitude, which perhaps has not been fully appreciated in Uganda, of the necessary shifts. It would be appropriate to increase Central Government expenditure on primary education to at least 3.5% of GDP (section F below), much of which would go to paying primary teachers a living wage. Reflecting Uganda's macro constraints, it probably would not be reasonable to make more that about 4.5-5.0% of GDP available for Central Government expenditure on education. In this case, Central Government spending for non-primary purposes - secondary, teacher training, other higher education, and administration - would have to be contained at about 1.2-1.5% of GDP. It will certainly be necessary to mobilize additional resources for secondary and higher education, but these would have to be mobilized from beneficiaries. The ratio of primary to total education spending would double from 38% in 1990/91, to about

---

5/ World Bank, Primary Education: a World Bank Policy Paper (1990), p.10

6/ "In light of the importance of primary education for development, public primary schools should avoid enrollment fees. Fees discourage parents from sending their children, particularly daughters, to school. They obstruct social equity and prevent equalization of the marginal social costs and benefits of primary school enrollment." Marlaine Lockheed and Adrian Verspoor, Improving Primary Education in Developing Countries (1991), p. 174

75%. Korea is an example of a country which has successfully implemented an education expenditure strategy along these lines.7/

4.55 Increased Government recurrent funding of primary education would go far towards reducing disparities in the quality and motivation of teachers, and the availability of instructional materials, reflecting variations in the wealth of PTAs. Reduction in the role of PTAs in financing primary education would increase access for children from low-income families and reduce dropout rates, particularly for girls.

4.56 Unfortunately, the Government's revenue performance has not improved as rapidly as had been hoped earlier, reflecting unfavorable developments in world coffee prices, and a slow pace of improvement in tax administration. Whereas the White Paper reflected an assumption that the revenue performance would increase from the low level of 1989/90 to 16-20% of GDP in the near future, in the actual event the revenue performance has stagnated at about 7% of GDP in recent years, and is now expected to be only 11.6% of GDP in 1994/95 (Chapter III, Table III.1).

4.57 In this context, it becomes important to consider the implications for the education sector of the Government's expenditure strategy, as set out in The Way Forward II, of concentrating Government expenditure on the most cost-effective interventions, in order to avoid spreading resources too thinly. The Government should certainly aim at improving the quality of instruction in the core subjects of the existing curriculum, and at increasing access. The question is, to what extent should scarce resources be reallocated away from these highest priority objectives, to the other objectives set out in the White Paper, i.e., vocationalization and additional language instruction. The resources to be reallocated include not only finance, but also students' learning time and teacher's preparation time. In view of the prevailing low quality (untrained teachers; lack of instructional materials) and low enrollment ratios, for the decade of the 1990s it would be desirable for the Government to concentrate largely on improving the quality of instruction in the core subjects of the existing curriculum, and on increasing access.

4.58 With regard to the vocationalization issue, it is relevant to consider the lessons of experience. Studies on diversified schooling at the secondary level in Colombia, Tanzania, and Kenya 8/ have found that: (a) diversified curricula are substantially more expensive than conventional academic curricula; (b) such schooling did not improve the fit between the school and the world of work; (c) diversified curricula are difficult to implement, because of the need for new instructional materials, teachers with new qualifications, and equipment. A multi-country review found that graduates of such programs usually did not obtain employment in the fields in which they received training in secondary schools, and did not

---

7/ "Korea concentrated central government funds on primary education, which is compulsory for children. By allocating three-fourths of its national education budget to primary schooling and relying on parents' willingness to pay for private secondary and tertiary education, Korea achieved primary education for all while satisfying the strong and growing demand for postprimary education." Lockheed and Verspoor, op. cit., p. 204.

8/ George Psacharopoulos and William Loxley, Diversified Secondary Education and Development: Evidence from Colombia and Tanzania (1985), p. 225. Jon Lauglo, Practical Subjects in Kenyan Academic Secondary Schools (Swedish International Development Agency, 1985).

receive economic benefits from their more costly schooling, "arguing strongly against vocational schooling on cost-benefit grounds."9/

4.59 In view of this experience, the trend in developing countries has been toward "clear structural separation of training from general education."10/ Strengthening general education at the primary and secondary levels, so that the labor force is trainable, is seen as the first priority for public policies to improve the productivity and flexibility of the work force. Training can be most efficiently provided in the workplace, or in "demand driven" private, non-workplace training facilities (for which subsidization may be justified in some circumstances), as in Zimbabwe.11/

4.60 Advocates of vocationalization in Uganda believe that academic schooling in Uganda has tended to yield negative attitudes toward physical labor, and emphasize the importance of relating the curriculum to the local environment. However, it should be possible to meet this latter objective without necessarily providing skill training to the extent envisaged in the White Paper.

4.61 Following are some observations on some of the other relevant policy issues.

4.62 The very sensible educators' recommendations concerning female enrollment understandably focus on school factors (Annex C). However, as mentioned earlier, in addition to school factors contributing to girls' under-enrollment, there are also out-of-school factors: the 12-to-18 hour workday of rural women coping with raising large families, as well being engaged in income-generating activities. One of the most important policies providing an "enabling environment" for girls' enrollment will be to make family planning services available to girls' mothers, so that they can limit the number of children they have, and space births out over longer intervals. This is discussed in Chapter VI.

4.63 Concerning the utilization of local government tax revenues, if it is accepted that, from the national development perspective, primary education is too essential to be left to uncertainty and variability of parental financing, then it is also too important to be left to the uncertainty and variability of local government financing. Too much "jointness" among different levels of government of responsibility for different services can result in blurring of responsibility and lack of accountability. Financing the essential elements of primary education should be recognized squarely as a Central Government responsibility. It would be preferable for local government tax revenues to be devoted to peculiarly local needs, such as water supplies, streets and sidewalks, etc. If local government tax revenues are to be devoted to education at all, this should be for secondary, not primary.

4.64 Concerning university education, there is no basis for believing that Uganda can afford additional public universities during this decade. Tuition should be introduced, with fees for different courses of study having some relationship to the costs of instruction. Government budgeting for the universities should be done in such a way as to provide

---

9/ Arvil Adams, "The World Bank's Policy Paper on Vocational Education and Training" (1992), p. 2.

10/ John Middleton and Terry Demsky, Vocational Education and Training: a Review of World Bank Investment (1989), p. ix.

11/ Vocational and Technical Education and Training: a World Bank Policy Paper (1991).

incentives for resource mobilization and cost containment. The establishment of the proposed National Council for Higher Education is a high priority. The responsibilities of the Council should include long-term projections and planning; accreditation; review of legislation; coordination of admissions; vetting budget requests of public universities; and advising donors of university needs. The Council should foster differentiation among the public institutions, and a sensible division of labor between public and private institutions. It should have broad representation, including importantly the private sector.

F. Universal Primary Education: Costs and Prospects

4.65 Whether to send a child to school is ultimately a decision made by parents or other guardians. The achievement of UPE will therefore depend not only on action to make enough school places with an adequate learning environment available, but also the "out of school" factors influencing parental decisionmaking, such as fertility. Essential school factors include the availability of instructional materials, trained teachers who are subject to incentives for effective performance, means for periodically assessing student achievement, and management arrangements which give the headteacher, as the manager of the school, means to achieve results as well as accountability for achieving them.

4.66 It would be beyond the scope of this report to examine all of the issues needing to be addressed in order to achieve UPE. This section explores the magnitude of the challenge of UPE by reviewing unit costs, and alternative projections for the growth of the 6-12 age cohort.

The Unit Costs of Primary Education

4.67 If the principle that the Government has an obligation to pay teachers at least a living wage is accepted, it follows that the current unit costs to Government of primary education are "distorted" by the failure to pay a living wage. In order to address this problem, an estimate of what the unit cost of primary education to Government approximately should be, if teachers were to be paid an equitable wage, is made in Table IV.5. (As mentioned in Chapter III, the Government is preparing a comprehensive reform of compensation for Government employees, including the Teaching Service.) Other Central Government Recurrent expenditures on education are left unchanged.

4.68 The resulting total cost to Government of primary education is about 3.4% of GDP, and the resulting unit cost is about $33 per student. How do these estimates appear in cross-country perspective? In the World Bank's recent book on primary education in developing countries, it was found that the median Government recurrent expenditure per primary student was $31 in low-income countries in 1985 (in constant 1985 dollars).12/ In the Bank's Long-term Perspectives Study on Sub-Saharan Africa, it has been found that low-income African countries will need to spend between 3% and 4% of GDP on primary education in order to achieve UPE. 13/ The estimate in Table IV.5 therefore looks very reasonable.

12/ Lockheed and Verspoor, op. cit., p. 335.

13/ The World Bank, Sub-Saharan Africa: from Crisis to Sustainable Growth, a Long-term Perspective Study (1989), p. 80.

Table IV.5: UNIT COSTS OF PRIMARY EDUCATION TO THE GOVERNMENT

	1991/92 Printed Estimates	1991/92 Fully Costed	1991/92 Equitable Wage
Central Government expenditure (USh m.)	18802	21828	73128
Ministry of Education	9785	12811	64111
Teachers' salaries	8374	11400	62700
Other	1411	1411	1411
Ministry of Local Government	9017	9017	9017
Central Government expenditure (% of GDP)	0.86	1.00	3.35
Ministry of Education	0.45	0.59	2.96
Salaries	0.38	0.52	2.87
Other	0.06	0.06	0.06
Ministry of Local Government	0.41	0.41	0.41
Enrollment (1990 increased by 3%)			2437921
Central Government expenditure (equitable wage) per student			29996.04 (about 30,000 shillings, or about US$ 33)

Note: The column on the left displays the Printed Estimates. As explained in the footnote to Statistical Appendix Table FE.1, the Printed Estimates do not include enough money to pay the teachers for the entire year. In the middle column, an adjustment is made which would enable the teachers to be paid at the existing compensation rates for the full year. In the right-hand column, the existing teachers' compensation has been multiplied by a factor of 5.5, to raise it to twice the average GDP/worker (the ratio prevailing in Kenya), in comparison with the current situation in which average teacher's compensation is only 36% of GDP/worker (Table III.4).

Prospects for the Achievement of UPE

4.69 Since enrollment growth will depend on parental decisionmaking as well as Government action, it is not possible to predict future enrollments with a strong sense of conviction. However, the relevant issues are illustrated in Table IV.6. It is assumed that increased Government expenditure on primary education would enable primary enrollment to increase by 6% annually.

Table IV.6: RELATIONSHIP BETWEEN FERTILITY AND ACHIEVEMENT OF UNIVERSAL PRIMARY EDUCATION

		CONSTANT FERTILITY		DECLINING FERTILITY	
Year	Enrollment	Age Group	Out-of-School	Age Group	Out-of-School
1990	2367	3291	924	3291	924
1991	2462	3374	912	3374	912
1992	2560	3459	899	3459	899
1993	2663	3546	884	3546	883
1994	2769	3635	866	3635	866
1995	2908	3727	820	3727	819
1996	3053	3891	838	3873	820
1997	3206	4062	856	4024	819
1998	3366	4241	875	4181	816
1999	3534	4427	893	4345	811
2000	3711	4621	910	4515	804
2001	3896	4801	905	4650	754
2002	4091	4988	897	4790	699
2003	4296	5183	887	4934	638
2004	4510	5385	875	5082	571
2005	4736	5594	858	5235	499
2006	4973	5807	834	5314	341
2007	5221	6027	806	5393	172
2008	5483	6256	774	5474	0
2009	5757	6494	737	5556	
2010	6045	6732	687	5621	
2011	6347	6999	652		
2012	6664	7276	612		
2013	6997	7564	567		
2014	7347	7863	516		
2015	7714	8170	456	5972	
2016	8100	8505	405		
2017	8505	8854	348		
2018	8930	9217	286		
2019	9377	9595	218		
2020	9846	10004	158	6476	

4.70 The projections for the 6-12 age group are based on the demographic projections in Annex C. The rapid growth of the cohort in the constant fertility scenario makes progress toward UPE very slow. The number of out-of-school children would decline to about 800,000 in 1995, rise slowly to about 900,000 in the year 2000, and then decline slowly to about 700,000 in 2010. The enrollment ratio would reach 98% in 2020, and UPE would probably be achieved around 2022. This is consistent with the finding in the Bank's LTPS study that some low-income African countries with the "standard fertility reduction" (reflected in the Bank's regional and global demographic projections) will not be able to achieve UPE by 2020. With a concerted fertility reduction effort, on the other hand, the number of out-of-school children would still be quite high at 800,000 in the year 2000, but then would fall rather steeply, enabling UPE to be achieved in 2008. In other words, Table IV.6 suggests that fertility reduction would enable the achievement of UPE to be brought forward by more than a decade. And this conclusion is only from the "first order" effects. When "second

order" effects of higher per capita incomes, both in households and for Uganda as a whole, and reduced time needed for child care, are taken into account, then the contribution of fertility reduction to raising the enrollment ratio would be even greater.

Strengthening of Primary Education

4.71 The Government places high priority on improving primary education. In order to strengthen primary teaching, the Government has decided to establish a Teacher Development and Management System, initially in 10 of Uganda's 38 districts. This will include a three-pronged program of reformed pre-service training, upgrading of unqualified teachers, and in-service training. Teachers' compensation will also be improved. Physical facilities (both PTCs, and primary schools) will be rehabilitated, and instructional materials will be provided. The Government's efforts will be supported by USAID through the Support to Ugandan Primary Education Reform (SUPER) program, and by IDA through the Primary Education and Teacher Development project. The IDA-financed project also includes a secondary education pre-investment study.

G. Investment Program and Expenditure Plan

The Five Year Investment Program 1992/93 - 1996/97

4.72 The Ministry of Education's Five Year Investment Program (June 1991) represents a step toward operationalizing the recommendations of the EPRC and the draft White Paper. The Plan consists of two volumes. Volume I provides a narrative (with which the discussion in this chapter is broadly consistent) on the major sector issues and policies. Volume II presents 39 project profiles, which set out project concepts and preliminary cost estimates. The projects are grouped into four categories: (a) expanding access and equity; (b) enhancing quality, and relevance; (c) building institutional capacity; and (d) improving educational finance and financial management. Some of these project concepts are based on pre-investment studies carried out under the IDA IV Education project. The total cost of the FYIP is $612 million (Statistical Appendix Table E.12), equivalent to 25% of Uganda's 1991/92 GDP. This figure does not include university rehabilitation, which was outside the scope of FYIP.

4.73 A number of the project proposals included in the FYIP, such as teacher training, for example, are excellent, and are being picked up for financing by IDA and other donors. Taken as a whole, however, the FYIP summary (Volume I) does not provide a clear and coherent strategy and scenario for the development of the education sector, for a number of reasons. First, the organization of the material along themes (access, equity, quality, etc.) turns out to have some problems when applied, since some of the interventions found under a particular theme are also important for other themes. Because of the thematic organization of the material, it is difficult to perceive what is being proposed for primary education, secondary education, etc. Second, in some cases there is inappropriate "projectization" of policy issues such as PTA fees or teacher's compensation. Third, although there is some discussion of the MOE budget level in aggregate, the FYIP lacks a clear relationship to the Ministry's actual or future pattern of budgetary expenditure. Perhaps in view of these conceptual weaknesses, the Ministry of Education does not intend to update or roll over the FYIP. Instead, it is being relied upon by Government and donors as a useful statement of policy issues, and as a "library" of pre-investment work, much of it excellent.

Toward a Medium-term Expenditure Scenario for the Education Sector

4.74 Looking to the future, the need is for the Government to work out quantitatively the expenditure implications of its education sector policies. Previous planning efforts, such as the FYIP, have not adequately taken into account the resources likely to be available.

4.75 As mentioned in Chapter II, in its Policy Framework Paper the Government has committed itself to move to the Medium Term Expenditure Plan (MTEP) as the organizing principle for planning and budgeting in Uganda. Under the Economic and Financial Management (EFM) project negotiated with IDA in March 1992, improvements in budgeting, accounting, and medium-term expenditure planning will be piloted in five ministries, one of which is the Ministry of Education.

4.76 To assist in thinking along these lines, Table IV.7 illustrates the pattern of resource mobilization and allocation in the education sector in 1989/90 (the year that Household Budget Survey data are available), and what the pattern of resource mobilization and allocation might look like in a future year, once Uganda's revenue effort has achieved Sub-Saharan "normalcy." The projections in Table IV.7 - and elsewhere in this report - do not reflect a conviction that the specific numbers shown are exactly the best ones for Uganda. Rather, the purposes are: (a) to illustrate analytical approaches - considering Government Recurrent and Government Development expenditures together, considering public and private expenditures together, analyzing the distribution of expenditure among levels of the system - which are suggested for adoption by the Government in its own policy/planning activities; and (b) to illustrate the approximate order of magnitude of needed changes.

Table IV.7: PRIVATE AND GOVERNMENT EXPENDITURES ON EDUCATION, ACTUAL AND PROJECTED
(% of GDP)

	Actual 1989/90	Private/ Total	Projected 1994/95	Private Total
EDUCATION				
Private Expenditures	2.1		1.5	
Primary	1.9		0.5	
Secondary	0.2		0.5	
Higher	0.0		0.5	
Government Expenditures	1.6		4.5	
Primary	0.6		3.1	
Secondary	0.2		0.3	
Teacher Training	0.2		0.4	
Higher	0.2		0.3	
Other	0.4		0.4	
Education - Total	3.7	57%	6.0	22%
Primary	2.5	76%	3.6	13%
Secondary	0.4	50%	0.7	57%
Teacher Training	0.2	0%	0.4	0%
Higher	0.2	0%	0.7	57%
Other	0.3	0%	0.4	0%

V. THE HEALTH SECTOR

5.1 The first section of this chapter identifies the types of health problems afflicting the Ugandan population. The second section describes the health care system, and its utilization. The third section discusses health sector expenditures and financing. The fourth and final section describes the current status of Government policy development in the health sector, and offers suggestions for a health policy framework.

A. Health Conditions

5.2 As mentioned in Chapter I, infant mortality probably fell by about 15% between 1965 and 1985, but since then is estimated to have risen back to approximately the 1965 level, reflecting the impact of neonatal AIDS. Adult mortality is expected to approximately double in the 1990s because of the AIDS epidemic (Chapter II, Table II.1). The overall crude death rate is estimated to be twice the average for low-income countries. Life expectancy at birth is presently estimated at only 42.7 years, and is projected to fall to 40.7 years during 1995-2000, which would be lower than World Bank estimates for all other countries in 1990, before recovering. In sum, Uganda's aggregate health indicators are among the world's worst.

5.3 The ten major specific causes of death in 20 government and NGO hospitals are shown in Table V.1[1]. Malaria was the leading killer in Uganda in 1990, with AIDS second. Diarrhea, pneumonia, and anemia each is almost as important as AIDS as the primary reported cause of death. Children under five accounted for 54 percent of hospital deaths, and among them, malaria, pneumonia, diarrhea, and malnutrition accounted for 55 percent of the deaths. Among adults, AIDS was the leading (17%) source of death, followed by tuberculosis, malaria, meningitis, and diarrhea.

Table V.1. Cause of Death in 20 Reporting Hospitals, Uganda, 1990.

Disease	Percent of Deaths in 1990
Malaria	14.2
AIDS	9.3
Diarrhea	8.7
Pneumonia	7.9
Anemia	7.3
Meningitis	5.6
Malnutrition	5.4
Tuberculosis	4.5
Tetanus	3.3
Trauma	3.1
Other	30.6

Source: Annex Table H.2

5.4 Outpatient statistics are viewed as considerably less reliable than inpatient data. Nevertheless, causes of outpatient morbidity in 1990 are almost identical to those listed in Table V.1, with malaria and upper respiratory diseases being the primary diagnoses for about 39 percent of outpatient visits in 17 reporting districts (Statistical Appendix Table H.1).

5.5 With inadequate family planning services, pregnancy-related health problems are important. Uganda's maternal mortality rate of about 300 per 100,000 births is more than twelve times higher than in developed countries, and a survey found that 7% of young Ugandan women reported having had an abortion. [2]

---

[1] Uganda's new health information system, which began operation in 1988, aims to reach complete coverage of all districts in the reporting of inpatient and outpatient statistics. It now covers 17 of 38 districts and draws its data principally from 20 government and NGO hospitals. Coverage of the system has steadily expanded over the last four years, raising the total *number* of illness episodes counted, but revealing an essentially unchanging *pattern* of morbidity and mortality.

[2] William K.A. Agyei and Elsbeth J. Epema, "Sexual Behavior and Contraceptive Use Among 15-24-Year-Olds in Uganda", International Family Planning Perspectives (March 1992), p. 13-17.

Injuries/trauma was the third-ranking cause for outpatient visits by adults in 1990, suggesting difficult work, living, and civil conditions.

5.6 For all practical purposes, the leading causes of illness and death are preventable, although with varying degrees of difficulty and requiring a variety of interventions.

5.7 The experience of other countries, such as China and Sri Lanka, suggests that policies to gain control over these preventable causes of death can result in swift changes in infant mortality and life expectancy. China's success is widely attributed to intensive public and environmental health measures.[3] In Sri Lanka, over the period from 1946 to 1953, infant mortality dropped by half, from 141 to 71. A contributing factor was gaining control over malaria, with recorded malaria cases dropped from 2.8 million in 1946 to 0.1 million in 1953.[4]

5.8 Disease statistics such as those presented for Uganda above usually reflect a very unhealthy environment, and many competing causes of illness or death. For children in such circumstances, it is well known that mother's education is a major determinant of good child health. Education in this case is probably a proxy for specific behaviors that protect a child, such as having fewer closely spaced siblings, healthful child care practices, weaning practices, and feeding. However, improved water sources, lower fertility, and a cleaner environment can allow less educated mothers to enjoy the same benefits for their babies. Improving health outcomes in this sort of environment cuts across the social sectors.

B. Health Care System

Infrastructure

5.9 The mission's estimates for the number and capacity of health units, based on MOH data for the public sector and a variety of sources, as explained in the footnotes to the appendix tables, for the NGO and private sectors, are shown in Table V.2. Uganda has approximately 86 secondary and tertiary hospitals, with about 13,800 beds. The government owns 58% of the secondary and tertiary hospitals and 61% of the beds. It owns 64% of primary hospitals and 58% of the registered outpatient clinics. In terms of ownership, therefore, the formal parts of the system are predominantly public. However, a large private, informal sector has also developed in recent years (box).

Table V.2. Health Units and Capacity by Provider, 1991.

	Tertiary and Secondary Hospitals		Primary Hospitals	Outpatient Clinics
	Number	Beds		
Government	50	8,474	188	612
NGO	36	5,343	66	165
Private	0	0	42	284
Total	86	13,817	296	1,061

Note: Tertiary and secondary hospitals include all hospitals from the district level and above. Primary hospitals are either health centers with inpatient facilities or dispensary / maternities. Outpatient clinics include dispensaries, sub-dispensaries, and aid posts. See text for discussion of private sector numbers.

Source: Annex Tables H.3 and H.4

[3] World Bank, China: The Health Sector (1984).

[4] Hastead, D., J. Walsh, and K. Warren, Good Health at Low Cost (1985), p. 83.

Box V.1
A View of Private Sector Development in Tororo District

In the absence of survey or licensing evidence of private health sector development in Uganda, observations of an anthropologist illustrates how the situation has evolved in Tororo district:

"Before 1971, private clinics, many of them run by Asian doctors, were only found in towns like Tororo and Mbale... In eastern Uganda the boom in rural private clinics and drug stores seems to have occurred in the mid-1980s. The first clinic in Busolwe opened in 1984, in Nagongera in 1985...

...The licensed clinics and drug shops are registered in the names of doctors. In a number of cases individual doctors had several licenses, but I did not find any case in which a doctor actually supervised the daily operation of his facilities. With one exception, the doctors who held licenses did not live in Tororo district; one was working in Nairobi, several were in Kampala, or in neighboring districts.

In some instances the doctor actually owned the business, paying a salary to the people operating it. In others it seems that the owners paid the doctor a fee for being allowed to register under his name. Workers in these places tended to have experience, if not formal training, in government health facilities. Many were simultaneously employed in hospitals and health centers. Other drug shops and clinics were not licensed; these tended to be owned by medical assistants, but they might employ people with less medical training to actually run the business...

Health workers who combine private practice and government employment arrange suitable schedules. Several who worked at a hospital had 'special duty'; they worked nights only, and since there was usually little to do at night they could sleep, and be rested for work in their drug shop or private clinic during the day. Others had arrangements with colleagues who covered their private practice on the days when they worked in the hospital...

...So far I have described private practice in which government health workers are directly involved... Some drug shops are owned and operated by people who have no training in medicine. More common still, many general shops sell a variety of pharmaceuticals including antibiotics... 'Bush doctors', usually self-taught, give injections and sell medicines in the village."

The author's conclusion might spark a spirited argument: "Those who operate private clinics and drug shops should be offered training courses in appropriate use of drugs... Perhaps local resistance councils should have a greater role in deciding who can sell medicine... I have already mentioned the need for public education campaigns and I would like to stress that in the present situation of widespread lay medication this is the single most important step to be taken...

The processes of privatization described here may be seen as specific examples of more widespread state dynamics, not only in Uganda but in many African nations... Yet I do not see a return to the golden age of free state medicine as feasible; we somehow have to deal with the problems of what exists, rather than dream that the clock can be turned back to the 1960s... What is needed now is a new conception of the state's role and recognition and guidance of people's efforts to care for themselves."

[Susan Reynolds Whyte, "Medicines and Self-help: The Privatization of Health Care in Eastern Uganda," in Hansen, Holger Bernt and Michael Twaddle, editors (1991), Changing Uganda. London: James Currey, pages 130-147.]

5.10 Statistical Appendix Table H.3[5] shows the distribution of health facilities by district. There are three districts (including two newly created districts) with no hospitals. In addition, Kamuli and Kasese have no government hospital, although they are covered by NGO hospitals and government health centers. Lower level government and NGO facilities are widely distributed throughout the country. A survey in 1984 found that, nationwide, 57% of the population was within 10 km of a health unit; however, this ratio was only 43% in the Northern region. [6]

5.11 There are approximately 1,200 people per hospital bed (Statistical Appendix Table H.4). The range is from 921 people per bed in the Central Region to 1,689 per bed in the Western Region. The people/bed ratio is relatively low for countries at Uganda's level of per capita GDP. India, which has a slightly higher level of per capita income, has about 1,700 people per bed, which is about 41 percent more people per bed. Indonesia, with about twice Uganda's per capita income, also has about 1,700 people per bed. Both countries enjoy substantially better health statistics than does Uganda. The population per health unit of any kind (government, NGO, and private formal sector units) is estimated at 11,491 for the whole country (Statistical Appendix Table H.3). The range across regions is small, from 10,265 in the Central Region to 14,201 in the Western Region, and it is easy to pick out four districts in the worst shape: Apac (Northern region), Bushenyi (W), Kibale (W), and Kisoro (W), which are the only ones with more than 20,000 people per health unit.

5.12 These data indicate that proximity to health facilities is generally not a problem in Uganda, with the possible exception of the North where some facilities have been damaged by fighting.

Personnel

5.13 Estimates of health sector personnel in 1991 are shown in Table V.3. In the Ministry of Health, there were 9,159 higher-level staff, of whom 1,797 (20 percent) were at Mulago Hospital. About 6,000 of these staff were engaged in patient care,[7] and another 3,000 were professionals in administrative positions. Almost 9,000 group employees -- support personnel such as janitors and cooks -- raise the Ministry's total employment to about 18,000. The National Health Personnel Study estimates that there are 60 doctors posted in NGO facilities; for other staff, the study lists the main categories of professional staff and bed strength for 7 NGO hospitals. The total number of NGO staff has been estimated by taking the average staff-to-bed ratio for these 7 hospitals, and multiplying by the total number of NGO beds in the country.[8]

---

[5] Annex Table H.3 has 3 sub-tables, H.3A for government, H.3B for NGOs, and H.3C for private.

[6] D.J.Anlwick, M.R. Stirling, and G. Kyeyune, "Population Access to Hospitals, Health Centers, and Dispensary/Maternity Units in Uganda" (1985)

[7] This statement is true for most professionals except, ironically, physicians. Many physicians are in full or part time administrative positions at the MOH, as District Medical Officers, as hospital directors, and in some cases as health center directors. The career path for physicians is out of patient care and into administration.

[8] The personnel appearing in Table 3 have the following qualifications. A physician undergoes five to six years of training and must enter medical school with a good record in the sciences. Medical assistants undergo three years of training and must have some background in the sciences. Registered nurses and midwives undergo three years of training and, optionally, 1.5 years of post-basic course work. Enrolled nurses and midwives have 2.5 years of training. Entry requirements for the "enrolled" cadre are lower than for the "registered" cadre. Physicians are generally the primary professionals in hospitals and are supported by the other staff. Medical assistants or registered nurses are likely to be the primary contacts for outpatients and responsible for much routine care. At the health center level, a physician is in part-time rotation, but a senior medical assistant is typically in charge. A number of medical assistants and nurse/midwives are on the staff. Pay scales in the government for Physicians: Senior Medical Assistants: Medical Assistants: Registered Nurses: and Enrolled Nurses are 1.0: 0.7: 0.4: 0.4: and 0.3.

5.14 Using these estimates, Uganda appears to be worse off than many other low-income countries in terms of availability of physicians, with about 25,000 people per doctor -- approximately double its ratio in 1965. However, if medical assistants (physician substitutes in providing simple care) are added to the total, Uganda has about 11,200 people per physician or physician substitute. The situation is somewhat better for nurses and midwives -- if these two groups are combined, there are about 2,900 people per nurse/midwife, a slight improvement in the situation that existed in 1965, when there were 3,130 people per nurse/midwife.[9]

Table V.3. Government and NGO Health Sector Personnel, 1991.

	MOH Count	NGO Estimate	Thousand People per Professional
Physicians	611	60	24.7
Registered Nurses or Midwives	1,329	525	8.9
Enrolled Nurses or Midwives	2,774	1,032	4.4
Medical Assistants	769	41	20.5
Health Inspectors and Visitors	286	0	58.0
Other Professionals	3,390	1,774	3.2
Professionals	9,159	3,432	1.3
Group Employees	8,770	?	
Total	17,929	3,432	

Source: Annex Table H.5 and Ministry of Health (1991), National Health Personnel Study, page 35.

5.15 Uganda has obviously reacted to the loss of physicians by substituting medical assistants for them. Over the years there has also been slight substitution of nurses for physicians: In 1965, there were a reported 3.5 nurses or midwives per physician or medical assistant; the estimates in this report indicate that the ratio is currently 3.8. The public sector is responsible for maintaining the implicit reliance on physicians and medical assistants, with a ratio of 3 nurses or midwives per physician or medical assistant. NGOs are much heavier users of nurses, with an estimated ratio in Table V.4 of almost 13 nurses or midwives to each physician or medical assistant. Why NGOs favor nurses is not known, but the ratios are so different between the two sectors that the cause merits investigation. Interviews with NGO hospital directors generate the hypothesis that government pay scales are quite distorted. For example, NGOs pay at least four times more for a full-time physician than for a registered nurse, while the government pays about double. Salaries for both types of professionals are about 2.2 times higher for NGOs than the public sector pays, including both salaries and allowances.

5.16 Since 1988, annual output of nurses from government and NGO training schools has increased by 21% to 619 nurses and midwives in 1990. Production of medical assistants was 70 in 1988, 22 in 1989, and 87 in 1990. Output of physicians has dropped sharply, from 44 in 1988 to 0 in 1990, although new enrollments have risen from 20 in 1988 to 141 in 1990. These numbers indicate considerable capacity to increase available professionals over the next decade. For medical assistants, nurses, and midwives, these enrollments (which will probably rise) means that about 11 percent of the stock of professionals can be replaced or augmented each year. The impressive training figures also suggest that many trained health workers are unemployed, working abroad, or in private practice.

5.17 The principal problems are (a) a personnel mix that favors hospital-based personnel over field-level staff; and (b) as associated distribution of personnel that favors urban centers. As is clear from Table V.4, health inspectors and health visitors are in short supply relative to physicians, nurses, and medical assistants. This phenomenon is due to the demands of the existing hospital- and clinic-based

[9] Personnel availability for 1965 comes from The World Development Report 1991.

system. At the present time, 20 percent of the MOH staff enumerated in Table V.4 are located in a single institution, Mulago Hospital, and 47 percent are in 49 regional and district hospitals or at MOH headquarters in Entebbe. Thus 67 percent of the MOH staff are physically located in hospitals in the main towns. The remaining 33 percent are assigned to 800 lower level clinics through District Medical Offices. In turn, about a third of the staff assigned to District Medical Offices are located at that office, which is usually located in the main town of the district (along with the district hospital). Thus about a fourth of the personnel hired by the MOH are engaged in providing rural services, mostly on an outpatient basis through static facilities.[10]

Organization of Public Sector Services

5.18 The Government health care system is organized into three principal tiers. Mulago Hospital, the national referral hospital in Kampala, is operated as an "self-accounting" department of the government, with its own budget. At the district level, the Ministry of Health is represented by the District Medical Officer (DMO), and almost every district has a district hospital operated by the Ministry of Health. District administrations, which report to the Ministry of Local Government, are responsible for operating all facilities at levels below the district hospital, such as health centers, dispensaries, and aid posts. This is intended to make the implementation of community health services a district-level responsibility. In fact, most of the employees in the system are currently on the MOH payroll and are seconded to local governments.

5.19 As noted in Chapter III, the Government has recently decided to implement a Decentralization program in ministries with field services, including health. In the future, the district hospitals will, for personnel management and budgetary purposes, report to the District Medical Officer, who in turn will report to the District Executive Secretary. Thus, unitary rather than dualistic administration of Government health services in the districts is being established.

5.20 There are two sets of questions arising from Decentralization. First, what programs or responsibilities should remain as Centrally-administered "vertical" programs? Some public health problems are restricted geographically, such as village-level sanitation or water supply. It is probably efficient for decisions on such local public goods to be made and financed locally, but with technical support from a Central Government ministry, as different communities may have different tastes and requirements for such goods. However, there are other health activities whose benefits extend across community boundaries. An example is vector control. In these areas, the Central Government must ensure that adequate efforts are made in adjacent localities, so that efforts in one locality are not rendered useless by inaction in an adjoining locality. For those health efforts which involve relatively sophisticated technologies, it will probably be necessary for the Central Government's Ministry of Health to take the leading role. Specific recommendations are made in the Report of the Task Force on Health Services Decentralization (June 1993).

5.21 Second, to the extent that health services are decentralized, what should be the relative roles of the Ministry of Health and the Ministry of Local Government? The MOH has historically been less of a policy-oriented ministry than a hospital-operating ministry, although the new leadership installed in 1991 is keenly interested in sector policy issues. The MOLG's health department, is new, with only a handful of employees. It has allocated funds to districts on a per capita basis, principally for the Expanded Immunization Program. The Ministry of Health should be responsible for the formulation of health policy, and technical oversight of health activities at the district level. MOLG should specialize in assisting local administrations to improve their accounting, budgeting, and

[10] These calculations are based on data in the National Health Personnel Study.

revenue collection. It would not be appropriate for MOLG to become an alternative source of health policy formulation.

Efficiency of Service Delivery in the Public and NGO Sectors

5.22 Table V.4 summarizes available statistics on length of stay and bed occupancy in 1990 for 9 government and 12 NGO hospitals. These hospitals are matched somewhat for level of care. At the secondary level, the length of stay in NGOs is about 45% longer than in the public sector. Given that NGOs are reputed to be generally better equipped and supplied, this difference may reflect a more serious case load mix in NGOs at the secondary level. At the tertiary level, the difference in LOS disappear. Capacity utilization is about 50% greater in NGO than in government hospitals. The low occupancy rates in government hospitals may reflect low standards of service, arising from lack of equipment and supplies, and low staff morale (see box on next page).

Table V.4. Utilization Data for selected Government and NGO Hospitals, Uganda 1990.

	Secondary		Tertiary	
	Government	NGO	Government	NGO
Average Length of Stay (Days)	9.2	12.9	9.5	9.0
Bed Occupancy Rate (Percent)	48.6	91.4	67.5	89.4
Reporting Units (Number)	7	10	2	2

Source: Ministry of Health, National Health Personnel Study, 1991

5.23 Available data on staff productivity in selected Government and NGO hospitals are summarized in Table V.5. These numbers, which standardize on the inpatient side for 100 percent occupancy, indicate that physicians in NGO hospitals would handle about 5 times as many patients as would government doctors; nurses, about twice as many; and medical assistants, about 18 times as many. As noted earlier, the staffing patterns between government and NGO facilities are quite different, with the latter relying heavily on nurses. Thus the apparent high productivity of NGO physician and medical assistants is partially caused by the fact that nurses are handling more of the patient services in NGOs. However, nurses are handling twice as many patients as their government counterparts, even though there are relatively more of them in NGOs. The productivity difference probably lies somewhere between the nurse and physician ratios, with labor productivity for inpatient care 3 to 3.5 times higher NGO hospitals. In addition, NGO hospitals in the sample treated about three times as many outpatients per professional employee.

Table V.5. Estimates of Relative Productivity of Government and NGO Staff, 1990.

	Inpatients per Year Per Professional		Ratio of Yearly Outpatients to Staff	
	Govt.	NGO	Govt.	NGO
Doctor	471	2441		
Nurse	160	349		
Medical Assistant	342	5995		
All Staff			378	1114

Source: National Health Manpower Study, pp. 57 and 58.

5.24 The data suggest that the government can learn from NGO facilities about how to increase productivity in the public sector, particularly in view of the fact that many physicians in NGOs are seconded by the MOH. Possible reasons for differences include excess capacity in the public sector, inefficient availability of supplies and other inputs, staff who are not fully employed, supervision,

incentives, and so on. In addition, the greater apparent productivity of NGOs provides an opportunity to increase overall efficiency of the system by moving patients out of the public sector and into NGOs. Presumably the quality of care is at least as good or better in NGO hospitals.

TRIP REPORT - JINJA TOWN

A visit to the town of Jinja permitted us to see some health facilities. These may not be representative of all health facilities in the country particularly those in rural areas but definitely demonstrated common problems in the health system.

JINJA REGIONAL HOSPITAL

This is a Government regional hospital a referral center run by the MOH. The hospital has 450 beds. One section of the hospital is used as a private wing. The main causes of morbidity and mortality in the hospital are malaria, malnutrition, anaemias and measles. The hospital receives inadequate funding from government. In the past local communities have tried to assist the hospital in cash or in kind, of note are the Indians in Uganda Association, Rotary Club and Lions Club of Jinja.

Main constraints facing the hospital are the inadequate funding, manpower shortage particularly consultants, (nurses positions are adequately filled), lack of equipment and regular supplies (including drugs). Staff do not have adequate accommodation. All these problems have led to low staff morale and a high staff turn over.

Not surprisingly the standard of services offered are low and the hospital is not fully utilized. The Hospital management believes that patients are willing to pay for services. However it is unlikely that at current levels of quality of services patients will be willing to pay. An improvement in the quality of services provided at this hospital would go a long way in attracting patients.

HEALTH CENTER

This was a government health center serving a predominantly peri-urban population. The nurses at this clinic are seconded by MOH while the rest of the staff are employed by MOLG. Personnel employed by the MOLG had not been paid their wages for the last 5 months. The main health problems seen at this facility include malaria, malnutrition and acute respiratory tract infections. Generally the clinic was poorly equipped lacking basic medical equipment such as BP measuring machines, emergency trays (resuscitation equipment) and bed linen.

ISLAMIC HEALTH CENTER

This clinic is owned by an NGO. The clinic provides a comprehensive range of services and patients are charged nominal fees for services and supplies. However the monies collected can hardly maintain the facility, they are barely enough for the payment of electricity, water and rent charges. The facility was not well maintained and the hospital beds did not have bed linen (a situation which can spread infection within the hospital). However the clinic had an adequate supply of essential drugs.

5.25 A recent study of hospital costs in three government and two NGO hospitals showed that spending per inpatient in 1989/90 by the government hospitals was approximately double that in the NGOs. Costs in the public hospitals are dominated by staff costs, drugs and food. Little or nothing is spent on other items (such as maintenance, equipment, and supplies), which accounted for 37% and 65% of spending in the two NGOs. Operational differences in these institutions must be substantial.[11]

Use of the Health Care System

5.26 There is a variety of information available on how people use this health care system. The facility-based data presented earlier reveal that, among secondary hospitals, the MOH owned about 62% of the beds but provided 46% of the bed-days consumed by the population in 1990, while NGOs owned 38% of the beds but provided an estimated 54% of the bed-days.

[11] Kadama, Dr. P. Y., (1991), "The Health Sector Costs and Efficiency Study in Uganda," IHPP.

Table V.6: POPULATION-BASED DATA ON CHOICE OF PROVIDER
(percent distribution)

	Govt. Facility	NGO Facility	Private Clinic	Other (informal)	Total
Nearest provider	32	20	28	21	100
Preferred provider	41	27	21	12	100
Provider chosen, if ill during previous two weeks	21	13	18	48	100

Source: Statistical Appendix Table H.6

5.27 A household health budget survey was conducted by the Child Health and Development Center at Makerere University in 1989 or 1990. The survey covered nine districts in all four regions and was designed to draw a representative sample from each district. A summary of the results is presented in Table V.6. This survey indicates that about half the population uses some form of care other than formal modern providers when they are ill. Almost all forms of treatment involve the use of modern or traditional drugs, and for many of the informal sources of care, money is paid to the provider for either professional services or for drugs. Among those seeking formal care in this sample, 40% used government services, 35% used a private clinic, and 25% used NGO services. By this measure, the government is providing 40% of modern curative services consumed on an outpatient basis and 21% of all outpatient services. The data suggest that the private sector accounts for 35% of modern outpatient services and almost all of the less formal types of care - in other words, about 66% of all outpatient services.

5.28 The Uganda Demographic and Health Survey also provides some information on use patterns for women and children. However, the published data are not tabulated by type of provider (government, NGO, private). The survey found that 3% of births were attended by a doctor; 36% by a nurse/midwife; 6% by a traditional birth attendant; and 55% by a relative, other person, or no one. Thus the formal sector (government, NGOs and private sector combined) are splitting about 40 percent of delivery attendances, and the rest take place outside the formal health system. About 87% of these women received care from doctors or nurse/midwives before their deliveries, so at that stage there is broad coverage by the modern health system. Among toddlers, 24% had received a full set of recommended immunizations while about 50% had received at least some of the recommended immunizations, so there is also some effect of the modern health system felt for this age group. Annex Table H.7 provides a more complete picture of the major results of the DHS survey.

5.29 These population-based data indicate that the government's curative system is a major source of care for some of the population, but it is probably not even close to being the primary source overall when people become ill. The same could be said for NGOs. For medical care before and after birth, the formal sector appears to play a much more important role, but over half the women give birth without attendance by a formal sector professional. Thus, while the Government and NGOs own large and well-distributed health care systems, they are treated by consumers as two among a variety of sources of curative services and medical supplies.

C. Health Expenditures and Financing

Conceptual Framework

5.30 As was mentioned in Chapter III, the existing MOH budget structure is not well-suited to measuring progress towards health expenditure policy objectives. For example, in the National Health Personnel Study, the Ministry has noted (page 137):

> So far, improvements under the budget reform programme have focused on the budgetary resources to individual ministries. There has been no emphasis to ensure that allocation of resources within a sector is in accordance with policy objectives and priorities . . . Budget reforms are yet to be initiated within the MOH . . . There is no effective, functionally-oriented or programme budgeting . . .

In view of the Government's current lack of a policy/program-oriented budget structure in the health sector, this report applies a framework for classifying health sector expenditure based upon the World Bank's Health Finance Policy Paper.[12] This section introduces the framework, which is then translated into program budget categories for analysis of the efficiency and equity of government spending.

5.31 Table V.7 provides a rough outline of the categories. Category 1 services -- data collection, health sector planning, health education, health information, regulation, and the whole panoply of sanitation, water, and environmental activities -- are those which must be carried out by the government if they are to be provided in adequate quantities. Private markets will not deliver enough of these goods and services because the beneficiary cannot own the benefit of the service without having to share it with others who do not pay. This characteristic creates an incentive for individuals to try to free-ride on each others' purchases, so less of the good is provided than people would demand if they could buy and own the benefits individually. The obvious example in health is an environmental activity like rodent or vector control. Everyone benefits from controlling pests or vectors notwithstanding whether they pay for the required interventions. Economists have emphasized the importance of community health interventions as a priority for governments in developing countries because the causes of most health problems, and this is certainly true for Uganda, lie within this sphere.

Table V.7. A Framework for Classifying Health Sector Intervention

Community Health Interventions (Category 1)
Epidemiological data collection
Health system planning
Health education
Regulation, licensing
Environmental health
Prevention of communicable diseases
Water, sanitation
Personal Health Services -- Preventive (Category 2)
Family planning
Maternal/child health
Infant nutrition
Immunizations
Treatment of communicable diseases
Personal Health Services -- Curative (Category 3)
Acute care
Inpatient
Outpatient
Laboratory services
Hospital hotel services

[12] Financing Health Services in Developing Countries, an Agenda for Reform: a World Bank Policy Study (1987), especially Box 1 on page 2, and Table 4 on page 19.

5.32 Category 2, personal health services of a preventive nature, creates problems for defining reasonable subsidy activities by governments. When an individual constracts a communicable disease, treatment of the symptoms has "private good" dimensions, but preventing infection of others is a public health problem. Disease prevention through immunizations is a classic example of the dual nature of these activities. Individuals are willing to pay for immunizations, but if immunizations are not subsidized or required by law, people may under invest in them from a public health standpoint -- not enough to interrupt transmission of the disease. Communicable diseases that could be controlled might fail to be controlled because of a failure of individual action. This failue can be eliminated by government action, but it does not mean that the government should "crowd out" all private action. Thus we make a distinction in this chapter between pure public goods -- those whose benefits can always be shared (Category 1) -- and individual-specific preventive services whose benefits a person can own to the exclusion of all other people (Category 2), but with significant public benefits.

5.33 Category 3, curative health care, is an area of health where the private sector can be expected to take primary responsibility. If the government becomes involved in providing these services, it can emulate the behavior of private firms in charging for them. Government provision does not require free provision, and there is no obvious reason for the government to crowd out private provision of the same services.

5.34 These are not hard and fast distinctions, and the size of Category 2 is indicative of overlaps that exist. However, this approach provides a framework for categorizing public expenditures, for analyzing how the government spends its money, for determining priorities among public expenditures, and for determining appropriate financing mechanisms for different services that are delivered.

5.35 This approach is applied in the following way. The government's budget is divided across the categories shown in Table V.8. The broad divisions are personal health services (Categories 2 and 3 in Table V.7) and community health services (Category 1 in Table V.7). Training, research, and administration are activities that would be difficult to allocate and are treated as overhead. Within personal health services, two broad subclassifications are preventive care, such as immunizations; and curative care, which is further subdivided into primary, secondary, and tertiary. The Ministry of Health, Ministry of Local Government, and Mulago Hospital budgets are reclassified along these lines.

Table V.8. Program Budget Classifications

Classification	Type of Activity
Personal Health Services	
Preventive (Category 2)	Immunizations, family planning
Curative (Category 3)	
Primary	Health Center, Aid Post
Secondary	District, Regional Hospitals
Tertiary	Mulago Hospital
Community health interventions (Category 1)	Health education, environmental health, vector control
Training	Training schools
Research	Research institutes
Administration	Management, overhead activities

5.36 What are the equity implications of these three categories? Category 1 expenditures can be both efficiency and equity enhancing. First, because no one can individually own the benefits of this type of spending, everyone can benefit equally from it. Second, because private expenditures can in part substitute for public expenditures, the richer segments of the population are able to solve the individual impacts of community-based problems more effectively. They can travel during epidemics, they can build their homes on high, isolated spots, they can more successfully store and treat large

volumes of water, and they can better afford to use preventive drug therapy. Their occupations are also likely to expose them to fewer dangers. When the government begins to solve community health problems, poorer segments of society gain larger net benefits because they are less able to protect themselves.

Private and Government Expenditures

5.37 As was pointed out in Chapter III, private spending exceeds Government spending in the health sector (Table III.5). Recurrent spending from all sources can be roughly estimated for 1989/90 (Figure V.1, based on Annex Table H.8). The figure contains two bars, one showing spending from local sources only, and the second showing total spending including donor aid, which is funnelled through the central government. When foreign assistance is excluded, about 75% of expenditure was generated through private out-of-pocket payments for services from the government, private practitioners, NGOs, traditional healers, and other sources of care. The central government contributed 19% of the total, while local government and charitable financing add very small amounts to the total.

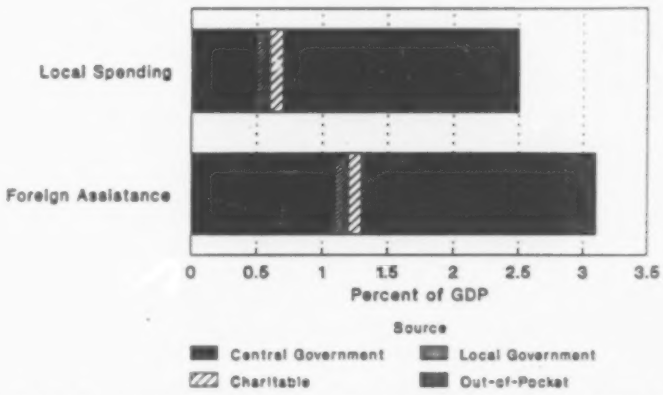


Figure V.1. Estimated Recurrent Expenditures for Health from All Sources, Uganda, 1989/90

5.38 Foreign assistance adds the equivalent of 0.7% of GDP to health, and these funds flow through the central government, raising its share to 43% of total spending. Even with foreign assistance, however, nongovernment spending dominates.

Allocation of Government Spending

5.39 The one part of the overall equation that the government can most directly affect, of course, is its own spending, even if it is a relatively small component of the entire amount spent. In this section it is categorized according to the framework introduced earlier. This task is accomplished in Statistical Appendix Tables FH.1 through FH.6, with the results reported here in Table V.9 and Figure V.2.

5.40 From an inspection of Table V.9 and Figure V.2, the following points emerge:

Health has absorbed a relatively small share of the financial resources directly controlled by the Government. Locally-controlled expenditure on health was only 0.5% of GDP in 1989/90, and 0.6% of GDP in 1990/91. There has been a tendency to underspend the locally-controlled budget - in 1990/91, actual spending of locally-controlled funds was 80% of what had been budgeted, which was an improvement over the 65% of the previous year.

Donor disbursements account for the majority of Central Government expenditure in the health sector, outweighing locally-controlled spending by a factor of 2.0 times in 1989/90, and 2.7 times in 1990/91. Donor disbursements in 1990/91 were much higher than budgeted, partly reflecting greater-than-expected exchange rate depreciation.

Table V.9: CENTRAL GOVERNMENT EXPENDITURE IN THE HEALTH SECTOR, AS A PERCENTAGE OF GDP

	1989/90	- 1990/91 -		1991/92	1992/93
	Actual	Budget	Actual	Budget	Budget
Locally-financed Expenditure	0.45	0.65	0.51	0.76	0.84
Personal health services	0.33	0.42	0.25	0.47	0.55
1. Preventive	0.00	0.00	0.00	0.03	0.07
2. Curative - Total	0.33	0.41	0.25	0.44	0.48
Curative - Primary	0.02	0.02	0.01	0.05	0.07
Curative - Secondary	0.15	0.15	0.08	0.16	0.14
Curative - Tertiary	0.16	0.24	0.16	0.22	0.28
3. Community health interventions	0.01	0.01	0.00	0.02	0.07
4. Training	0.03	0.04	0.02	0.04	0.02
5. Research	0.01	0.01	0.00	0.01	0.01
6. Administration	0.08	0.17	0.23	0.22	0.19
Donor Disbursements	0.88	0.45	1.39	0.94	0.64
Personal health services	0.72	0.35	1.06	0.82	0.59
1. Preventive	0.10	0.06	0.11	0.11	0.10
2. Curative - Total	0.62	0.29	0.95	0.71	0.49
Curative - Primary	0.41	0.11	0.62	0.36	0.19
Curative - Secondary	0.14	0.07	0.28	0.20	0.14
Curative - Tertiary	0.07	0.11	0.05	0.14	0.16
3. Community health interventions	0.13	0.08	0.20	0.06	0.04
4. Training	0.01	0.01	0.04	0.01	0.00
5. Research	0.00	0.00	0.00	0.00	0.00
6. Administration	0.03	0.01	0.09	0.04	0.00
Total Central Government Expenditure	1.33	1.10	1.90	1.70	1.48
Personal health services	1.05	0.76	1.31	1.29	1.14
1. Preventive	0.10	0.06	0.11	0.14	0.17
2. Curative - Total	0.95	0.70	1.20	1.15	0.98
Curative - Primary	0.42	0.13	0.63	0.42	0.26
Curative - Secondary	0.29	0.22	0.36	0.36	0.27
Curative - Tertiary	0.23	0.35	0.22	0.37	0.44
3. Community health interventions	0.14	0.08	0.21	0.09	0.11
4. Training	0.04	0.06	0.06	0.05	0.03
5. Research	0.01	0.01	0.00	0.01	0.02
6. Administration	0.10	0.19	0.32	0.27	0.19

Source: Based on Statistical Appendix Table FH.6.

BEST COPY AVAILABLE

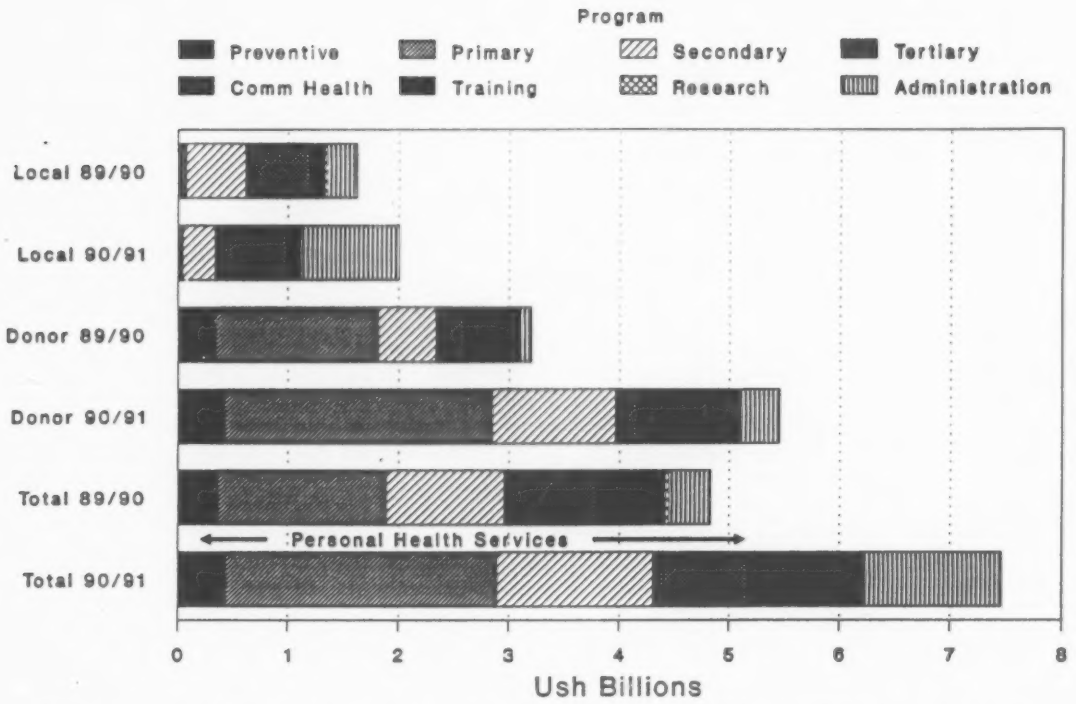


Figure V.2. Amount and Distribution of Local and Donor Spending, 1989/90 and 1990/91 Actuals, in Constant 1987/88 Currency Units.

In terms of the conceptual framwork presented earlier, resource allocation has favored Category 3 (curative) services. In 1990/91, 69% of Government health expenditure was for personal health services (including 63% on curative and 6% on preventive), 11% on community health, and 20% on administration and training overhead. Locally-controlled funds have been skewed toward hospital services, while donor funds have supported primary curative services, preventive measures, and community health interventions.

5.41 Much of the primary care, preventive care, and community health services expenditure is driven by specific, large donor projects. In the preventive category (Category 2), over 95% of spending is accounted for by three programs, Maternal and Child Health, Family Planning, and the Expanded Immunization Program. These programs are all targeted to mothers and their young children. For primary care (Category 3), the Uganda Essential Drugs Management Program accounts for about 25% of spending, Two rehabilitation projects consume another 36% of the spending. The other 39% is scattered across a number of smaller projects to rehabilitate the primary care system. Community health interventions (Category 1) are dominated by a few large programs, including several different Health Education components of vertical programs and the Control of Diarrheal Disease Program. Spending on environmental health, sanitation, vector control, and other public health activities is so small as a share of local and foreign contributions that it is almost undetectable in the budget. AIDS has received considerable attention from donors, but as can be seen by perusing the FH annex tables, a number of components of the AIDS Control Program have been assigned to non-public health categories.

5.42 The question of the efficiency of resource allocation in the public sector is whether funds are being spent in the most effective way to combat the diseases from which the popoulation suffers. Table V.10 lists the ten major causes of hospital mortality in Uganda against the three categories of interventions. It is worth reiterating that Category 1 and 2 interventions will be supplied in inadequate quantities by the private sector. Efficient allocation of resources requires that the public sector focus on these two categories, but the Government of Uganda spent 17% of donor-supplemented public funds on these two categories in 1990/91.

Table V.10. Summary of Alternative Approaches to Controlling Health Problems

Disease	Category 1: Community Health	Category 2: Mixed / Preventive	Category 3: Personal / Curative
Malaria	Vector control, education	Screening, prophylaxis	Prophylaxis
AIDS	Education	Screening, prophylaxis, family planning	Hospital and clinic services
Diarrhea	Water supply, sanitation, education	Oral Rehydration Therapy, Nutrition, Family Planning	Hospital and clinic rehydration
ARI	Education, living conditions, control of other diseases	Nutrition, screening	Hospital and clinic treatment
Anemias	Malaria control, control of other vector-borne diseases, sanitation, education	Nutrition, screening	Hospital and clinic treatment
Meningitis	Epidemic control	Immunization	Hospital and clinic treatment
Malnutrition	Control of indirect causes, education, living conditions	Nutrition or feeding programs, family planning	Hospital and clinic treatment
Tuberculosis	Sanitation, living conditions, control of other diseases	Screening	Hospital and clinic treatment
Tetanus	Education, training, change in birth practices	Immunization, family planning	Hospital and clinic treatment
Trauma	Crime control, public safety, occupational safety, legal protection	Counseling	Hospital and clinic treatment

Note: This table is not intended to be scientifically rigorous or exhaustive but to provide an example, using Uganda's top ten killers, of the different types of interventions that are possible. It is based on Annex 1, written by a physician on our team, Dr. Alex Zinanga.

5.43 It should also be possible to array spending on the major causes of morbidity and mortality -- from all sources, not just the public sector -- against the three major categories of expenditure (community health, mixed/preventive services, and curative services). This is done in Figure V.3, which is based on annex Table H.9. The procedure is as follows. First, spending is allocated across three categories. For the government, all of community health spending and half of spending on preventive services is allocated to Community Health (Category 1). The other half of preventive spending, half of primary health care spending, and ten percent of hospital spending is allocated to Personal Preventive (Category 2). The remainder of hospital spending is allocated to Personal Curative (Category 3). Overhead (training, research, and administration) is allocated to the three categories according to the proportion of spending represented by each. Local government, charitable, and private spending are allocated in a similar manner. No private spending is allocated to Category 1. These allocations reflect an effort to overstate spending on community and preventive services.

5.44 Second, spending by category is allocated across diseases in proportion to the case load precipitated by each disease. The diseases in FH.4 account for about half of the total hospital admissions and bed-days, so it also accounts for only about half of overall spending. Spending on community health is arbitrarily allocated equally across diseases, although it should be possible identify how that spending is actually targeted. Because, as indicated above, most of it resides in specific donor projects, it is probably more skewed toward AIDS, ARI, and diarrhea than is indicated

by the table.[13] Category 2 expenditures are allocated across diseases according to the number of *inpatient* cases attributed to each disease for 1990 in annex Table H.2. Category 3 expenditures are allocated according to the share of hospital bed-days, which is assumed to reflect the intensity of care required by each disease. Table H.9 shows all of the numbers.

5.45 The figure speaks for itself. For each of the ten major killers and causes of morbidity, well over half of estimated spending is devoted to curative care despite the fact that most of this spending could be avoided through public action. For most of the diseases, the small allocation shown for community health interventions is probably a gross overstatement of actual spending. The question for resource allocation in the public sector is how to allocate public funds to reduce curative spending on these disease problems by exerting control over the underlying causes rather than treating the symptoms. From this review, the indications are that there is considerable room for both more spending and better targetting.

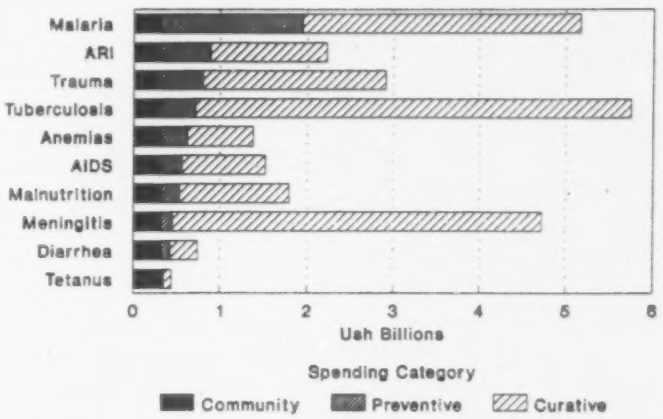


Figure V.3. Approximate Spending on Disease Problems by Government, NGOs, and Households According to Type of Service, 1989/90.

5.46 Concerning the equity of Government expenditures, spending on public health activities can lead to greater efficiency and equity in the distribution of public spending, as discussed earlier. Most governments attempt to finance (but not necessarily to deliver) at least a minimal package of personal health services to the population. For preventive services, there are community benefits to doing so. For curative services, common standards of fairness are usually invoked to justify helping individuals who might be denied health services when they are most in need. Yet neither concern suggests that the government should absorb the full cost of these services nor that it should target its subsidies widely to all citizens. Narrow targeting of curative care subsidies can result in effective redistribution within the government's budget constraints. Broad targeting of subsidies through general price supports or free care for all usually results in very small point-of-service subsidies that are widely dispersed and easily captured by better-off segments of the population.

5.47 If Mulago Hospital is dropped from the budget, remaining expenditures are not poorly distributed. The reason is that almost every district has a public hospital, each district has a district health officer's office, and health clinics are widely dispersed. The MOLG's distribution of its funds on a per capita basis contributes to a fair distribution of spending across districts. The major equity problem is which individuals capture subsidies provided through public sector facilities. It is clear from the DHS, for example, that better educated women are much more likely to give birth in public hospitals or maternities than are poorer women, so they capture a large share of maternity ward subsidies. However, until population-based data from the forthcoming Integrated Survey are available be matched with Government expenditure data -- it will remain nearly impossible to make any strong statements about the distribution of public subsidies by income groups.

[13] Note that EPI spending could not be allocated to a specific disease in the table -- success in that program has eliminated measles from the list (see Annex Table H.2).

Cost Sharing

5.48 NGO facilities in Uganda have a long history of charging fees for their services. Table V.11 displays estimated rates of cost recovery for five mission hospitals. The hospitals account fairly well for donations they receive, but to be conservative we should assume that if all costs were fully accounted at market prices, the level of cost recovery would be somewhat lower than indicated. Nevertheless, except for St. Kizito, these hospitals are certainly paying the full recurrent cost of their operations even though they are competing with government hospitals that are nominally free of charge. This information suggests that Ugandans have considerable experience paying for hospital care, both inpatient and outpatient, and that it is possible to achieve a fairly high degree of cost recovery for good quality services.

Table V.11. Estimated Cost Recovery in NGO Hospitals, 1989-1991.

	Beds	Occupancy Rate (Percent)	Percent of Cost Recovered
Kamuli Mission	130	50	95
Virika Hospital	146	76	78
St. Kizito	207	97	10
St. Francis	316	100	91
Mengo Hospital	280	80	87

Source: Hospital Annual Reports, calculations by the author.

5.49 A proposal to collect specified fees in Government facilities (Statistical Appendix Table H.10) was put forward in 1990, but not accepted. In the 1992 Budget Speech, it was announced that Government hospitals would be allowed to operate private wings which would charge full cost. At the local level, many health units, with the approval of their management committees, have begun to charge fees. In Kabarole District, a study found that revenues from user fees were used for supplies such as fuel and soap, repairs to buildings and equipment, transportation, and staff allowances, contributing to increased availability of health workers and reduced waiting time. Other constraints, such as shortages of essential drugs, remained. Interviewees generally expressed willingness to pay higher fees to obtain further improvements in service.[14] However, thus far, recognized user charges have played only a minor role in the financing of Government health services.

5.50 There is no apparent development of private insurance in Uganda, and there is none in the public sector. Some employers provide health services directly to their employees, and others apparently have contracts with NGOs or private providers to offer services to their employees. No NGO hospitals were reported by their respective bureaus to offer any kind of prepaid plan to residents of their communities. In essence, therefore, the government is providing health insurance to the population through its health care system because it is available for free as a last resort. This is not necessarily an efficient approach to providing insurance because it ties the individual to a specific service that severely rations both the quantity and quality of service delivered. As the Government of Uganda succeeds in imposing user fees for some health services, policy concerns will shift to risk sharing mechanisms to help people pay for care. In the meantime, insurance is a secondary issue.

Summary Assessment

5.51 This review has placed the Government's health expenditures into a program budget framework. The major findings are a low domestic spending effort, which has recently been supplemented by large infusions of donor funds. The health system is oriented to delivering personal curative services, which consume nearly 63 percent of public spending. About 6 percent of public

[14] J. Kamugisha, "Health Cost Sharing in Kabarole District" (June 1993)

spending is on preventive services, and 11 percent is spent on community health. The rest goes to overhead, such as research, training, and administration. The money spent on preventive services and community health is project driven, which has left some high-priority activities poorly funded, including vector control and environmental health. An important result of these public sector spending patterns is heavy out-of-pocket spending on preventable diseases and a heavy load of these patients on government, NGO, and private facilities.

D. Policy Framework for the Health Sector

5.52 The issues described in the preceding sections are well recognized in the Government's current planning/policy statement, entitled The Three Year Health Plan Frame 1993-95: Financing Health for All: Executive Summary (December 1992). TYHP recognizes the following problems needing to be addressed: the curative orientation of the health system, while most health problems are preventable; the concentration of expenditure on hospitals; the lack of incentives for improved resource utilization; and low morale among health care workers.

5.53 In order to address these problems, TYHP proposes a strategy along the following lines:

> Existing services will be restored, by rehabilitating war-damaged units and increasing operational expenditure, so that they operate at a minimum acceptable level of quality. However, Government will not support expansion (in terms of new units) over the next three years.
>
> Resources will be reallocated to focus more on prevention and promotion, including especially MCH/FP, immunisation, water and sanitation, nutrition, HIV/AIDS control, and malaria. This will depend on leadership by district authorities to initiate community-based activities.
>
> In order to increase resource mobilization for the health sector, Government health units (some of which have begun to collect small charges for services) should begin to collect a significant amounts from user charges, to be administered with clear accountability, for services and drugs.
>
> The role of NGO facilities should be considered in such a way as to reduce duplication of efforts between the Government and nongovernmental sectors. This could include selective financing of those NGO facilities that have difficulty in breaking even.

5.54 These strategy directions are highly appropriate. In order to move to effective action, the Government will need to attend to the following issues: greater total health spending; measurement of reallocation toward more cost-effective services; the institutional implications of Decentralization; and strategies for addressing particular health problems.

5.55 Total health spending, public plus private, in Uganda stands at only about $6 per capita, as compared with $11-19 per capita in most Sub-Saharan African countries.[15] World Development Report 1993 has estimated that a package of "essential" (highly cost-effective, in averting the burden of disease) health services would cost about $12 per capita in low-income countries. This estimate is based on selected countries in the low-income group, which has average GDP per capita of $350. The package of essential health services has not yet been costed in the Ugandan context. Labor costs are generally lower in countries with lower average incomes, and therefore the package migh

[15] World Development Report 1993: Investing in Health, Table A.9, p. 210

possibly cost somewhat less than $12 in Uganda. However, considering that some private spending will undoubtedly continue to be devoted to relatively less cost-effective services, it is clear that there is a need for a substantial increase in total health spending. The Government should begin to monitor trends in total health spending, based on the Central Government budget, and periodic surveys of private expenditure, such as the Integrated Survey carried out in 1992/93. As discussed in Chapter III, with the expected improvement in the Government revenue effort, the Government should make more budgetary resources available to the health sector. Concerning the mobilization of private expenditure through user charges, the Task Force on Health Services Decentralization has suggested that Government health units should aim at 50% cost recovery within the next 3-5 years; this is a worthwhile objective.

5.56 Concerning reallocation toward prevention and promotion, it will be helpful for the Government to begin quantifying such reallocation. There are two aspects to this. First, the MOH budget format lacks transparency as to the resources devoted to hospitals and lower-level facilities, respectively, because of the treatment of the MOH wage bill and the Central Medical Stores as lump-sums. This weakness should be addressed. Another, more demanding way of measuring such reallocation would be to measure the delivery of those services which are most cost-effective or "essential", and which the Government therefore especially wishes to promote.

5.57 In order for the district health administrations to effectively play their enhanced role under Decentralization, they will need training and selective computerization for budgeting, accounting, and health information systems. Some aspects of donor-financed "vertical" programs will need to be "de-verticalized"; the Task Force on Health Services Decentralization has made specific recommendations, which are currently under consideration. Proposals for enhancing autonomy of health units, especially hospitals, within a framework of accountability, will need to be tested out. Principles for Central Government budgetary allocations to districts will need to be determined. In view of the greater potential for cost recovery in better-off districts, it would be desirable to provide larger Central Government allocations to poor districts. The Ministry of Health will need to be restructured and strengthened to effectively carry out its intended roles of policy analysis and formulation, supervision, inspection, standard-setting, and donor coordination.

5.58 The Government's overall strategy should include "substrategies" for the control of specific major diseases, and other major health needs such as family planning. The substrategies for disease control should reflect the lessons of successful experience with disease control programs.[16] Successful disease control programs identify an appropriate technological strategy and package, and adapt it to local cirumstances. Successful programs pursue their objectives with the game plan, budget, manpower, technical support, and management commitment needed to win. Successful programs use both vertical and horizontal modes of operation, with the degree of verticalization reflecting the sophistication of the disease-control technology, with "high technology" programs more verticalized, and "lower technology" programs more integrated with basic health services.

5.59 TYHP importantly recognizes that applied research in areas such as health finance, monitoring and evaluation, and standard setting, will be helpful in refining the evolving health sector policy.

[16] Issues relating to programs fro controlling specific diseases are discussed in Bernhard H. Liese, Paramjit S. Sachdeva, and D. Glynn Cochrane, Organizing and Managing Tropical Disease Control Programs: Lessons of Success, World Bank Technical Paper No. 159 (1991).

Annex: THE MAJOR CAUSES OF MORBIDITY AND MORTALITY IN UGANDA

1. Malaria

A parasitic infection of the blood system transmitted by mosquitoes. The body does not build permanent immunity against malaria. Control is only possible through vector control- draining swamps, spraying the surrounding. Other life saving measures include making antimalarial drugs readily available in the infected communities through village community workers and rural traders. All health facilities should be equipped to do simple diagnostic tests for malaria. Pregnant women should be screened for malaria as a matter of policy. Malaria mortality can be very high in infants and children. Although hospital stays are not long malaria treatment becomes expensive when there is resistance to the commonly used drugs. The environmental control of malaria is much cheaper and more cost effective than treatment.

2. HIV/AIDS

This viral infection which depresses the body's immune system, making the body vulnerable to all sorts of opportunistic infections. There is no vaccine or treatment at the moment. The only hope there is to change sexual behavior and use condoms. The spread of AIDS has also brought back many diseases which were almost eradicated in the past such as tuberculosis, Karposi sarcoma, and pneumonias. With no cure available the medical approaches include health education and use of condoms. Hospital admissions tend to be very lengthy and expensive. Community based health care programs for AIDS patients have been used successfully in some countries and these have reduced drastically the cost burden of taking care of an AIDS patient.

3. DIARRHOEAL DISEASES

Diarrhoeal diseases are caused by a variety of micro-organisms usually transmitted through the oral faecal route. This is a disease of infants and children. Morbidity is usually high because a child can have several attacks in one year. Mortality can be fairly high if the infant or child is not attended to in time. Control of diarrhoeal diseases can be done at primary level through health education, supply of clean water and sanitation and replacement of fluids by breast feeding and the use of salt and sugar solution. Prevention of these conditions is much cheaper than admitting these children to hospital for fluid replacement.

4. ACUTE RESPIRATORY TRACT INFECTIONS /PNEUMONIA

These are caused by bacterial or viral infections and cause high morbidity and mortality in children and infants. The condition is common in crowded poorly ventilated surroundings. Most cases if seen early do not require hospital admission and can be treated effectively at primary level.

5. ANAEMIAS

Anaemia is not a disease as such but a sign of underlying conditions such as malaria, parasitic infections, and malnutrition. While morbidity is very high in this condition mortality is usually low. In most cases the condition reverses itself once the underlying cause is removed. Rarely hospitalization is necessary and blood transfused.

6. NON-MENINGOCOCCAL MENINGITIS

This type of meningitis is caused by either a bacterium or a virus. This condition is common among socially disadvantaged groups. Both morbidity and mortality are high and treatment requires

hospitalization and use of expensive drugs. An effective referral system is necessary to reduce mortality.

7. NUTRITIONAL DEFICIENCIES

In a country like Uganda which produces enough food to feed its people the problem of malnutrition especially among children is due to maldistribution of food and inappropriate feeding habits. Health education, supplementary feeding programs would go along way in controlling nutritional deficiencies. Morbidity is very high among affected children. This problem could be compounded by the orphan problem now facing some parts of the country due to AIDS. The problem of nutritional deficiencies is more than a medical problem its is a socio-economic and agricultural one. Because of its chronic nature the long term consequences are usually serious.

8. TUBERCULOSIS

TB is a bacterial infection which affects mainly the pulmonary system but can inflict any part of the body. The major mode of transmission is through the inhalation of infected sputum. TB is common in crowded surroundings and in people with low resistance to disease. Immunization screening for the disease had almost eradicated the disease in most parts of the world but the spread of AIDS has brought back TB in epidemic proportions. Treatment of TB patients requires X-ray screening, expensive drugs and hospital admission in most cases. The complications of TB carry very high morbidity and mortality and require prolonged hospital care.

9. TETANUS

Tetanus is a bacterial infection usually through an open wound. A vaccine is available and is effective against future infection. Treatment of this condition should be available at primary level. Good hygienic practices particularly at deliveries would go along way to reducing tetanus among the new born infants. Both morbidity and mortality are very high in this condition. In acute cases sophisticated management is required. The training of TBA's in sterilizing their equipment as well as equipping them with delivery packs has significantly reduced neonatal tetanus in some countries.

VI. FAMILY PLANNING

A. Knowledge, Attitudes, and Practice of Family Planning

6.01 In 1988/89, the Uganda Demographic and Health Survey (UDHS) obtained information on women's knowledge, attitude and practice of family planning. The next survey-based measurement of family planning practice will come from the Integrated Survey being carried out in 1992. There are no comparable previous surveys to allow assessment of trends. There is a lack of corresponding data for men, although a couple of studies have gathered some data on males' knowledge attitudes and use of condoms.

6.02 The UDHS reported a total fertility rate (TFR) of 7.3, a rate which is believed not to have changed over the last two decades. Some of the factors which have sustained this high fertility include the pronatalistic cultural beliefs and practices such as universal marriage, early age at marriage, and the desire to have many sons. Half of Ugandan women are married by the age of 18 years. Childbearing begins early, with 8 percent of women giving birth by the age of 15 years and 50 percent by the age of 18 years. However there are now some indications that women's attitudes about family sizes are changing. The desired number of children is lower than the observed TFR at 6.5 children especially among the young, the educated and urban residents.

6.03 Knowledge of at least one modern method of family planning is fairly high among all women in Uganda at 82 percent. The most commonly known method is the oral pill followed by female sterilization. Surprisingly the condom was known to only one third of the women, despite the campaign for its use as part of the AIDS Control Program. (A study among Ugandan males supported by WHO found that only 33 percent of the males knew about condoms.) Knowledge of family planning is highest among urban and educated women. Seven in ten women who know of one method of FP also know where the method can be obtained.

6.04 According to the UDHS, positive attitudes towards family planning is fairly (71%) high among women who know about family planning methods. Like knowledge, it is highest among the urban and educated women. Women's assessment of husbands' attitudes toward family planning was as follows: approve, 26%; disapprove, 40%; don't know, 34%. These data indicate that male attitudes is a problem area. Sixty percent of women reported that family planning was never discussed with their husbands. Evidence from male studies indicates that most men consider family planning to be a woman's business. When men express positive attitudes towards or approval of FP, they really mean they would allow their wives to use contraception, not that they would do so themselves.

6.05 Practice of contraception is very low in Uganda at 5.5 percent among all women of reproductive age, and 4.9 percent among married women. Only 2.7 percent use modern methods of family planning. The most commonly used method is rhythm method followed by the oral pill. Condom use was only reported by 0.2 percent of urban women and virtually 0 percent in rural areas. However an AIDSCOM male study found a condom prevalence use of 2.7 percent among all males. Contraceptive use is highest in urban areas, among the educated, and high parity women-especially if their children are alive.

Table VI.1: Satisfaction of Demand for Contraception Among Married Women, Uganda 1988/89 and Other DHS Countries 1985-89

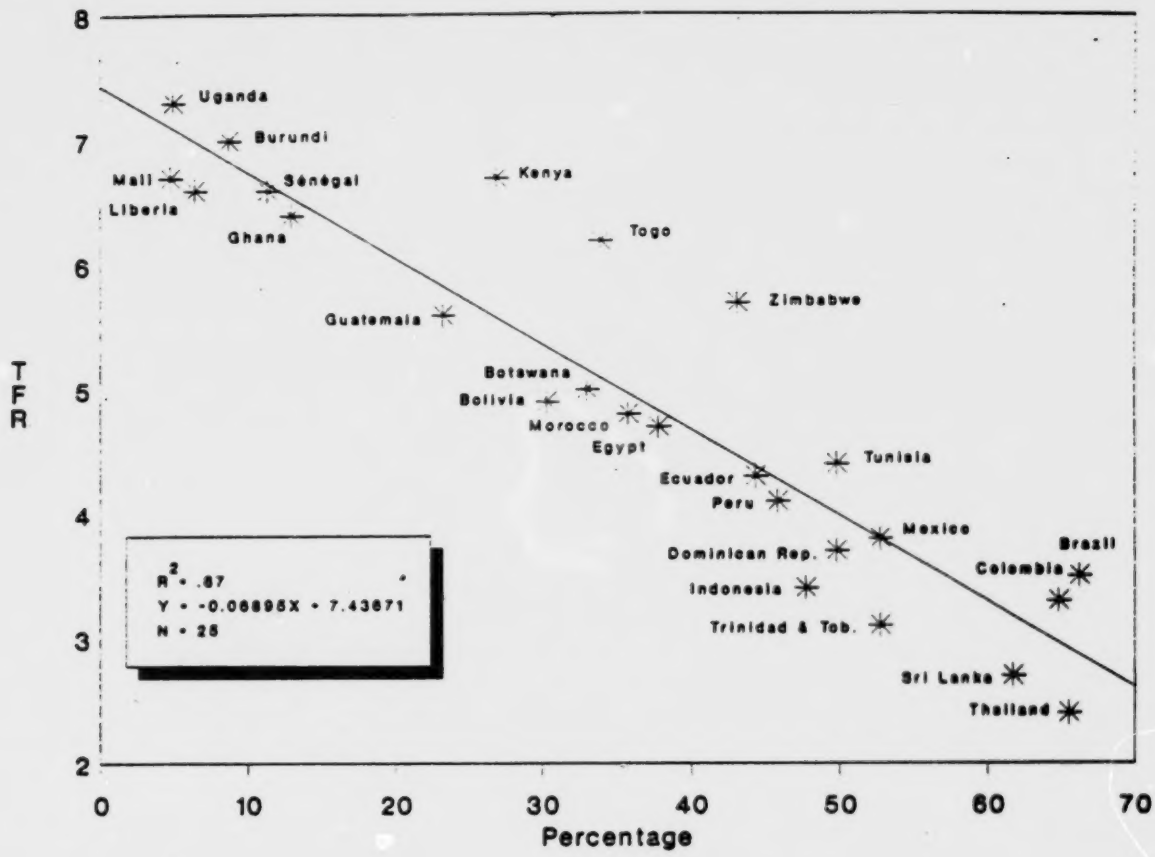
Country	Demand for Contraception[a]			Unmet Need			Current Use			Percentage of Demand Satisfied		
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting
SUB-SAHARAN AFRICA												
Botswana	61.6	38.6	23.0	26.9	19.4	7.4	33.0	17.9	15.1	53.6	46.4	65.7
Burundi	33.8	23.5	10.3	25.1	17.7	7.4	8.7	5.8	2.9	25.8	24.7	28.2
Ghana	48.1	34.2	13.9	35.2	26.2	9.0	12.9	8.0	4.9	26.8	23.4	35.3
Kenya	64.9	31.0	33.9	38.0	22.4	15.5	26.9	8.6	18.3	41.5	27.7	54.0
Liberia	39.3	23.4	15.8	32.8	19.8	13.0	6.4	3.6	2.9	16.4	15.4	18.4
Mali	27.6	21.2	6.4	22.9	17.2	5.7	4.7	4.0	0.7	17.0	18.9	10.9
Togo	52.2	36.4	15.8	40.1	28.5	11.7	12.1	8.0	4.1	23.2	22.0	25.9
Uganda	32.1	22.0	10.1	27.2	19.9	7.3	4.9	2.1	2.8	15.2	9.5	27.7
Zimbabwe	64.8	37.6	27.2	21.7	10.1	11.6	43.1	27.5	15.6	66.5	73.1	57.4
NORTH AFRICA												
Egypt	64.8	16.5	48.3	25.2	10.1	15.0	37.8	5.9	31.9	58.4	35.8	66.0
Morocco	60.8	26.4	34.4	22.1	12.5	9.6	35.9	12.7	23.2	59.1	48.1	67.4
Tunisia	71.1	24.9	46.2	19.7	10.6	9.1	49.8	13.5	36.3	70.0	54.2	78.6
ASIA												
Indonesia	64.7	28.5	36.1	16.0	10.1	6.0	47.8	17.8	29.9	73.8	62.5	82.8
Sri Lanka	75.9	21.5	54.4	12.3	7.2	5.1	61.7	13.1	48.6	81.3	60.9	89.3
Thailand	77.1	21.8	55.3	11.1	5.6	5.5	65.5	15.9	49.6	85.0	72.9	89.7
LATIN AMERICA/CARIBBEAN												
Bolivia	69.8	17.5	52.3	35.7	9.5	26.2	30.3	6.5	23.8	43.4	37.1	45.5
Brazil[b]	81.1	24.2	56.9	12.8	4.8	8.0	66.2	17.9	48.3	81.6	74.0	84.9
Colombia	80.9	22.1	58.9	13.5	5.1	8.3	64.8	15.4	49.4	80.1	69.7	83.9
Dominican Republic	71.2	20.8	50.4	19.4	10.0	9.4	49.8	9.6	40.1	69.9	46.2	79.6
Ecuador	70.8	23.8	47.0	24.2	10.8	13.4	44.3	11.6	32.7	62.5	48.7	69.6
El Salvador	73.8	22.3	51.5	26.0	13.9	12.1	47.3	8.1	39.2	64.1	36.3	76.1
Guatemala[b]	53.4	22.1	31.4	29.4	16.4	13.0	23.2	5.1	18.1	43.3	23.1	57.6
Mexico	79.0	25.9	53.1	24.1	11.0	13.1	52.7	13.5	39.2	66.7	52.1	73.8
Perú	77.8	21.7	56.1	27.7	8.1	19.6	45.8	11.2	34.6	58.8	51.6	61.7
Trinidad&Tobago	71.1	28.6	42.5	16.1	8.3	7.9	52.7	18.9	33.8	74.2	66.1	79.5

[1] Demand includes method failure, current use and unmet need.
[a] Figures are for women 15-44.

6.06 According to the UDHS over 50 percent of non-contraceptors did not wish to become pregnant in the near future, wanting either no more children or to delay the next pregnancy by at least two years. Some of the reasons given for non-use include lack of knowledge of contraceptives by 33 percent, religious reasons by 20 percent, opposition to FP by either the woman herself or her husband by 9 percent, lack of accessibility by 9 percent and inconvenience of the methods by 8 percent.

6.07 Clearly, there is an enormous gap between generally favorable attitudes (at least among women, but not men), and very limited practice of family planning. One of the DHS comparative studies has measured demand for contraception to be 32% of married women In Uganda (most of which was for spacing, rather than limiting), as compared with only 5% current use, so that only 15% of demand was being satisfied, which was the lowest rate of demand satisfaction among all 25 DHS countries (Table VI.1). This reflected the relative lack

Figure VI.1: Relationship between Contraceptive Prevalence and TFR, 1985-89
Uganda 1988/89 and Other DHS Countries 1985-89



Source: Institute for Resource Development, Demographic and Health Surveys Comparative Studies No. 6, "Knowledge and Use of Contraception" (1991), p. 31

of access to contraceptive services in Uganda. Among the eleven DHS countries for which service availability data were collected, Ugandan women found to have the least access. For example, the median distance to a family planning facility was 5.2 km in Zimbabwe, 6.5 km in Togo, and 19.2 km in Uganda. Similarly, community-based distribution was available in a majority of the countries, but not in Uganda in 1988/89.1/

1/ Marilyn Wilkinson et al., "Availability and Use of Contraception: a Comparative Analysis", unpublished paper presented at the DHS world conference, Washington, D.C., 1991.

6.08 The relationship between contraceptive prevalence rate (CPR) and fertility in the DHS countries is illustrated in Figure VI.1. As can be seen, two of the African countries - Kenya and Zimbabwe - lie considerably to the northeast of the regression line. This is because African populations differ somewhat from populations outside Africa, in the nature of the demand for contraception. As can be seen from Table VI.1, outside Africa the demand for contraception for limiting is generally about twice the demand for contraception for spacing. Within Africa, the demand for limiting is generally less than the demand for spacing. The implication is that a particular CPR tends to be associated with a higher TFR in Africa, than outside Africa. The Uganda data are consistent with this generalization. With the demand for contraception at 32% and the DTFR at 6.5, in the absence of a supply constraint the Uganda data point would lie slightly to the southeast of the Kenya data point. The distance between this hypothetical, unconstrained point, and the actual observation, reflects the large supply shortfall in Uganda.

C. Family Planning Services

6.09 Family Planning services are currently provided by a mixture of the public sector (Ministry of Health and Ministry of Local Government); nongovernmental organizations NGOs including religious groups; and the private sector. According to the 1989 UDHS the government facilities provide FP services to 47 percent of contraceptive users compared to 33 percent from PFAU clinics and 20 percent from the private sector (private doctors, clinics, pharmacies chemists etc). Reflecting the lack of an organized national family planning program, poor recordkeeping in the clinical level in both Government and NGO clinics, and the lack of a reporting system, unfortunately there are no current usage data available.

Public Sector Family Planning

6.10 In the Ministry of Health (MOH), planning and coordination of family planning service delivery is the responsibility of the Maternal and Child Health/Family Planning (MCH/FP) Division. The division is headed by an Assistant Director of Medical Services (ADMS). Under the ADMS are four medical officers' posts (three of which are currently vacant). The division includes an MCH/FP Training Unit supervised by the ADMS. At the district level, the District Medical Officer (DMO) and the District Health Visitor supervise and coordinate MCH/FP service delivery. Below this level, services are fully integrated in that there are no staff specially designated to carry out MCH/FP duties.

6.11 It is estimated that overall only 92 government health facilities out of 713 offer FP services. These facilities are mainly in large towns and cities. Most services are offered on specific days and times, and they are sometimes irregular. The service delivery points need better trained staff, more equipment, and more reliable supply, and many need physical rehabilitation as well. These problems are discussed below.

6.12 Staffing and Training. The available personnel are maldistributed, with a bias in favor of urban facilities. Over 80% of medical doctors in Government service either occupy an administrative post at central level, or work in urban areas. There is a serious shortage of personnel in rural areas, particularly enrolled nurses/midwives and health visitors. Consequently most peripheral health facilities are now manned by nurse aides or other medically untrained personnel.

6.13 A major constraint to FP provision is the lack of trained staff. The staff delivering services in the Government health system particularly in the rural areas are not trained in FP and as such are not confident to deliver FP services. Clinic based methods are not readily available because providers are not trained in their provision. However the issue of FP training is a priority of the MOH and the major donors in the FP area, USAID and UNFPA.

6.14 FP training was started in 1986 with the assistance of USAID. Under this project, FP training capability was established in the MCH/FP division of the MOH. A Core Training Team (CTT) of ten trainers was formed and is now in place in the MCH/FP division. This CTT does training needs assessments, planning, actual training, evaluation, and trainee follow-up. A six week Clinical Family Planning Curriculum was also developed and is now in use. This curriculum is now the official FP curriculum used by all sectors training in FP in Uganda. FP is now integrated into the Nurse training so that all qualifying nurses are now equipped with FP skills. To date 181 service providers have been trained in Clinical FP by the CTT, 20 of whom are tutors at the schools of midwifery and general nursing. Out of the remaining 161 only 54 (38 from MOH and 16 from NGO's) are still actively providing FP services. The nurse training schools on the other hand produce 100 nurses a year, but it is not clear whether these nurses are providing services.

6.15 Current training plans are to train in phases, target at grassroots service providers and decentralize training. In the first phase service providers in the 13 districts under UNFPA project will be trained so that training is synchronized with the health facilities rehabilitation and IEC efforts. Training will also be decentralized to regional and district levels starting with the same area. Trainees will be followed-up and in-service courses conducted. Grassroots service providers such as traditional birth attendants and community health workers shall also be trained in FP motivation. FP shall also be integrated into the curriculum of pre-service nurse training, public health nursing school and medical school.

6.16 Contraceptive Supply System. Contraceptives are procured by donors, oral contraceptives, condoms and intra-uterine devices by USAID while injectables come from UNFPA. These contraceptives are stored at the Ministry of Health's Central Medical Stores in Entebbe, prior to distribution to NGO as well as Government facilities. MOH lacks a system and procedure for ensuring proper distribution of contraceptive supplies and maintenance of adequate stock levels without overstocking or stock-outs. It is not uncommon for health facilities to alternate between being overstocked and out of stock, a situation which is believed to be responsible for non use of contraception and very high drop-out rates. In the past a push system resulted in overstocking and consequential destruction of large quantities of contraceptives. Now the system is a pull system where the CMS responds to requisitions from facilities after the ADMS MCH has sanctioned the order. A review of the CMS distribution records shows that demand for contraceptives is sporadic, and supplies are drawn by only a small number of district medical officers and medical superintendents.

6.17 The Uganda Essential Drugs Management Programme established with the assistance of the Danish Red Cross with financial support from DANIDA has now managed to get essential drugs for PHC on a quarterly basis to most of the rural health units. However contraceptives are not included in the 27 drugs packed in these kits. Contraceptives are not included on the drug requisition forms and no separate form is available for requesting them.

6.18 Storage of contraceptives and their management at service delivery points can only be described as inadequate. No usage data is kept or collected.

6.19 Voluntary Surgical Contraception (VSC) is a method of contraception gaining in popularity in Uganda. There are now 15 centres providing minilaparotomy under local anaesthesia services in Uganda. Plans are under way to renovate and equip a further 9 centres outside Kampala and Jinja. A total of 63 nurse/midwives have now been trained in VSC counseling and 11 doctor/nurse teams have been trained in ML/LA techniques. Mulago is doing almost 500 tubal ligations under local anaesthesia and over 10 vasectomies a year. Jinja another training facility also does around 400 tubal ligations under local anaesthesia and a couple of vasectomies. The department of Obstetrics and Gynaecology at Makerere University has now integrated ML/LA training into their internship training programme. The MOH is planning a phased expansion of the services.

Nongovernmental Organizations

6.20 There are a number of non governmental organizations currently providing family planning services in Uganda or which have the potential to do so and have indicated their interest. The major NGO in this area is the Family Planning Association of Uganda (FPAU). Church organizations have also started to show more interest in this area.

6.21 The Family Planning Association of Uganda (FPAU), a voluntary, non-governmental, non-profit organization is a member of the International Planned Parenthood Federation (IPPF). According to the 1989 UDHS the association provided 33 percent of FP services in the country. As a voluntary organization FPAU now has over 700 volunteers nationally. Sixteen elected members of these volunteers form a National Executive Committee responsible for policy determination and overseeing the affairs of the association. The Executive Director is responsible for the day to day running of the association. The association has a staff compliment of 140 staff made up of 35 in service delivery, 60 in IEC and 45 in administration and support services.

6.22 FPAU funding comes from international donors and the association's own resources. The main donor is IPPF which provides about 95 percent of the association's total budget. The association raises a small proportion of its funds through volunteers'contributions (currently this is only 500 shillings for life membership), charging for services and supplies, selling some IEC materials, and renting out audio-visual equipment. In 1989 the Association's total expenditure amounted to some 96 million Uganda shillings, while in 1990 it was 232 million.

6.23 The operations of the association are divided into service delivery, information education and communication, and training. FP service delivery is through 16 static clinics and 5 mobile clinics. The static clinics are housed in the area offices around the country. All these facilities are in cities and large towns thus serving a mainly urban clientele. There are 35 nurse/ midwives providing FP services at these clinics. These staff are trained using the MOH 's Six Weeks Family Planning Clinical Skills comprehensive curriculum. The clinics provide oral contraceptives, injectables and barrier and chemical methods. The IUD, long term and permanent methods are not provided because of lack of trained personnel. Virtually all the contraceptives distributed by FPAU come from IPPF. Submission of service statistic from area offices is not regular.

6.24 There are three main religious-affiliated groups which play an important role in health care delivery during this reconstruction phase. These are the Catholic, Protestant and Islamic

Medical Bureaus. The scope of FP services provided by the Catholic services is limited to natural family planning. Under their Family Life Education - Natural Family Planning program, natural family planning counselling and services are provided to anyone who wishes this method, not only Catholics. The Church of Uganda particularly the Busoga and East Ankole dioceses operate some of the most active family planning programmes in Uganda. VSC services have been introduced at some of the facilities and a CBD pilot project consisting of 14 sites is being implemented with technical and financial assistance from Pathfinder Fund. The Islamic Medical Bureau is another potential source of FP services in Uganda. At present the bureau operates some 17 health facilities some of which provide FP services though on a very limited scale. However the Bureau has indicated its willingness to expand its family planning delivery capacity.

Private Sector Family Planning Services

6.25 The main providers of FP in this sector are private medical practitioners (physicians and midwives), private clinics, pharmacies and chemists, work-based programmes and the recently introduced social marketing project. It is estimated that there are 89 registered private clinics, over 1000 nonregistered ones, 49 pharmacies and 1000 drug stores, all with the potential of providing FP services.

6.26 Because of the limited supply of foreign exchange, no private sector operators import contraceptives. With the exception of the Social Marketing Project (discussed below), the majority of commodities used in the private sector are diverted from the MOH. The size of the commercial contraceptive market is very small; for example, in 1988, only an estimated 60,000 packets of oral pills and 564,000 pieces ond condoms were sold.

6.27 The method mix available in the private sector is very limited. The two most commonly available methods are the condom and the oral pill. The IUD is only available at very few gynecologists' practices, and subdermal implants are not yet available. The cost of contraceptives are also high when compared to incomes. The condom costs anything between 10 and 900 shillings per piece depending on the brand and where one buys it, a packet of pills costs between 200 and 500 shillings, and tubal ligation around 5000 shillings.

6.28 The Social Marketing Project project was introduced under the USAID supported Expanded Family Health Services Project. The aim of the social marketing project is to make contraceptives more readily available through commercial outlets. The objective is to compliment public sector family planning efforts and target at middle income groups who can at least pay for these services. The contraceptives under this project are reasonably priced, lower than commercial prices (so that they are affordable) but higher than public sector prices (so that they are perceived as high quality).

6.29 The project is administered by a local private firm, Armtrades. To date the project has only been selling condoms. These condoms are supplied by the donor, repackaged and distributed by ARMTRADES. The price of the condom is 150 shillings a piece to the consumer. Since the introduction of the project in late 1991, condom sales have risen dramatically. Fifty thousand condoms were sold in the first quarter of 1992, 73,000 in the second quarter and 100,000 in the third quarter.

6.30 Pilot projects in introducing workplace-based FP projects have been successfully completed at two companies, BATA and Uganda Breweries. FP services are provided for employees and their dependents at the work place. In these projects IEC was provided as well as contraceptive methods. It is now planned to extend similar services to 25 more companies through out Uganda in the next five years.

6.31 There is a large number of private health providers in Uganda, through which it should be possible to reach a significant number of clients. Most of these providers get their contraceptives from the public sector FP programmes, MOH and FPAU. Before these providers are fully functional they need to be trained in family planning. Plans are underway to coordinate, train, equip and supply some 200 licensed members of the Private Midwives Association. These midwives operate facilities mainly in peri-urban and rural areas of Uganda.

C. Information, Education, and Communication

6.32 Information sources for contraceptive methods and family planning are limited in Uganda. According to UDHS, women receive their information from antenatal clinics, friends/ relatives, health workers, and the radio, in that order of importance. According to the National Health Plan the family planning programme will be restructured so that the MOH assumes the major responsibility for family planning service delivery while the FPAU reduces its emphasis on service delivery and expand its role in IEC.

6.33 There are a number of actors involved in the IEC field in Uganda. Unfortunately most programmes and projects are not coordinated. The main organizations providing IEC are the MOH through the Health Education Division, the FPAU's IEC unit and various government ministries. A number of NGO's are also involved in FP IEC but to a very limited extent. The main provider of IEC in the private sector is the Social Marketing project.

6.34 The Ministry of Health's health education efforts are coordinated by the Health Education Division at Headquarters. Comprehensive health education is now provided in over 100 subcounties, and there are plans to increase the number of subcounties to 330 by 1993 and to 560 by 1995. Operations at district level are the responsibility of District Health Educators supervised by the District Medical Officers. Family planning IEC has now been incorporated in all health education training in the country.

6.35 Within the Health Education Division, MCH/FP IEC is taken care of by a Health Educator seconded to HED by the MCH/FP division. This officer ensures that MCH/FP is included at all stages of programme and material development. However very little materials either on FP or containing FP messages have been produced by the HED.

6.36 The Ministry of Information and Broadcasting provides free air time its Radio Uganda on population and family planning issues regularly. Articles are also written on these subjects in the print media. The ministry is getting support under the UNFPA IEC project as well as from the First Health Project financed by the World Bank.

6.37 FPAU's IEC program is focussed on crucial target groups such as opinion leaders, men and youths. IEC is concentrated in the same districts where services are being

strengthened by the UNFPA, USAID and World Bank's health facilities rehabilitation programmes. It is hoped that these IEC efforts will be synchronized with service delivery.

6.38 The IEC unit is headed by an IEC Officer at headquarters assisted by an Assistant IEC Officer. In the 18 areas of FPAU IEC is coordinated and implemented by the Area Officers and field educators. There are some 33 field educators throughout the country. The major activities carried out by this unit are, addressing groups on family planning, showing FP films followed by discussions. Print materials although produced in the past are rarely produced now because of high costs and delays in getting them from the printers. When these were produced they were generic and few. FPAU volunteers are also involved in FP motivation and education in their areas. Following the restructuring exercise of 1988/89, radio and television programmes were stopped so were articles in the newspapers and displays at National Day celebrations. The FPAU has been subcontracted to implement IEC components of the UNFPA and USAID projects.

6.39 As part of projects financed by UNFPA, FPAU is involved in training motivators and developing materials for the following programs: Population Education for the Organized Industrial Sector, which will introduce family planning in 25 companies, following the successes with Uganda Breweries and Bata Shoe Company; Population/Family Planning Awareness through Radio and Television; FP Awareness and Motivation through Agricultural Extension Agents.

6.40 The FPAU IEC unit also conducts a Family Life Education (FLE) programme for both in and out of school youths. IEC officers travel to schools and visit youth organizations to give talks and film shows on responsible parenthood and other issues relevant for this age group.

6.41 An important component of the social marketing project project will be IEC. Printed material and T-shirts have been developed and distributed. A radio advertisement of condoms was started in August 1991 however this advertisement had to be removed due to opposition fom the religious sector of the community. There are plans to come up with a more culturally acceptable advertisement and may be advertisements on television later.

D. Donor Support for Family Planning Activities

6.42 As should already be clear from the preceding discussion, almost all funding of family planning activity in Uganda comes from donors, primarily UNFPA and USAID. The present UNFPA country program was started in 1988, and is for $18 million over a four-year period. There are 12 inter-related projects, which include: the 1991 census; population and development planning; training in demography and statistics; IEC; MCH/FP, and AIDS control. The MCH/FP program focusses on 13 districts, and the target is to recruit some 250,000 family planning acceptors. In 1989, the USAID-supported Expanded Family Health Services project was started. This project has six components: population policy development; research and analysis; training; contraceptives and logistics management; IEC; and social marketing of contraceptives.

E. The Possible Costs of Family Planning

6.43 There are no data available on the costs of family planning in Uganda. The question of possible costs must therefore be discussed on the basis of the experience of other countries.

6.44 There are both conceptual and practical problems involved in assessing the costs of family planning programs 2/:

> The major functions of a family planning program include: contraceptive services; information, education, and communication (IEC); training; and research and evaluation. Where the objective is to meet an existing high level of demand, the bulk of expenditures will be for contraceptive services, such as Profamilia in Colombia where 81% of expenditures are for contraceptive services. Where objectives include expansion of demand to meet MCH or demographic goals, there will be greater expenditure on IEC. "Costs per user" will obviously vary depending on whether one considers total program costs, or only the costs of contraceptive services.
>
> Functions may be offered in a freestanding, "vertical" way, or alternatively they may be integrated with other programs.
>
> In low-income countries, programs may rely on commodities donated by foreign donors, in which case costs borne by the country may be less than "costs to the world".
>
> The costs per user can be expected to vary depending on "the total number of users, the number of outlets, the density of the populaation, the level of demand for family planning, the characteristics of the clients, the method mix offered, the delivery mode employed, the quality of services, the maturity of the program, the objectives of the program, and the level of efficiency."

6.45 With those qualifications, the average annual cost per user in developing countries has been estimated at $16. The ranges of annual costs estimated, in a number of countries (mainly in Latin America and Asia), for various methods is as follows: female sterilization, $7-24 (this estimate spreads the cost of the operation over the number of years for which the risk of pregnancy is averted); IUD, $4-25; oral contraceptives, $7-29; condoms, $11-37. For Malawi, the World Bank staff have estimated that cost per user could decrease from $20 in 1992 to $8 in 1996, as fixed program costs are spread over a larger number of users.3/

6.46 In Uganda, average household consumption expenditure is about $800.4/ An annual cost of $20 would therefore be equivalent to 2.5% of average household expenditure. While this amount is not trivial, it is certainly acceptable in relation to the labor and psychological burdens on women of raising more children than they desire, and the finacial burden of childrearing costs, such as education and health, on households and the Government budget.

2/ Susan Cochrane et al., "The Economics of Family Planning" (World Bank, draft, 1990).

3/ World Bank report no. 8513-MAI, Malawi: Population Sector Study (1991), p. 69.

4/ GDP per capita is about $150; personal consumption expendiutre is about 96% of GDP; and the average household size is 5.5

The distribution of cost-sharing among users, the Government budget, and foreign donors must be arranged in such a way as to avoid a significant financial deterrent to family planning practice.

F. Assessment and Future Directions

Assessment

6.47 The main points emerging from the preceding discussion are as follows:

In 1988/89, the contraceptive prevalence rate of 5% was among the lowest in the world, and the total fertility rate of 7.3 was among the highest in the world.

Women's attitudes toward family planning are largely (71%) favorable; however, women report that, among their husbands, disapproval is more common than approval.

In 1988/89, only 15% of demand for contraception was satisfied, the lowest rate among all countries for which this was measured. Among the 11 DHS countries for which service availability data were collected, Ugandan women were found to have the least access.

"Supply side" constraints include lack of trained staff, logistical weaknesses, and the distance of much of the rural population from supply points.

Future Directions

6.48 In Chapter II, the benefits to Uganda of reducing fertility in order to decelerate rapid population growth and lower the dependency ratio were presented. In particular, a "fertility decline" scenario under which the TFR would be reduced to 6.5 during 1995-2000, 5.8 during 2000-05, and 5.0 during 2005-2010 was displayed. As can be seen from Figure VI.1, this would imply moving Uganda during 1995-2000 to approximately the CPR/TFR position achieved by Kenya in 1989, and moving Uganda during 2000-05 to approximately the CPR/TFR position achieved in Zimbabwe in 1988.

6.49 Achievement of such objectives for Uganda will require significant improvements in the following areas: (a) Government commitment; (b) access/service delivery; (c) IEC and attitudinal change, particularly among men; (d) research and evaluation.

6.50 The World Bank's Population and Human Resources Department has recently prepared a paper reviewing experience with family planning programs in the developing world. Among its findings is the following:

> Government commitment. National commitment to family planning has been essential to the rapid fertility declines in a few developing countries . . . Although contraception has spread because of voluntary actions by couples, their decisions and actions have been facilitated by organized family planning programs. And national commitment has enabled programs to obtain the necessary leadership, publicity, and resources to provide essential services. Fertility decline would undoubtedly have

begun even without Government commitment, but it would have been a much more lengthy process. 5/

6.51 The Three Year Health Plan recognizes that family planning services should be made available to the 52% of Ugandan women potentially in need of family planning for limiting or spacing births. However, Uganda presently lacks an institution charged with administering a national family planning program, such as Zimbabwe's National Family Planning Council or Indonesia's National Family Planning Board. There is a need to establish a focal point for the formulation of objectives (both ultimate objectives such as fertility decline, and proximate objectives) for a national family planning program, and monitoring of progress toward their achievement. One possibility would be a Governmental agency as in Zimbabwe, Kenya, or Indonesia; another possibility would be to assign such a responsibility to the private FPAU, but with oversight and financial grants coming from the Government.

6.52 Service delivery approaches will have to be a mixture of clinics and social marketing for the urban population, and outreach services (community-based distribution; moblie clinics) for the rural population. New FP methods, such as the implant Norplant, should be introduced and promoted. Surgical contraception services, presently available only in some districts, should be made available in all regions of the country. There is a need to set up a modern logistic system to ensure a continuous flow of contraceptive commodities.

6.53 In order to support service delivery, the training capacities of MOH and FPAU need to be strengthened, setting up training teams and well-equipped training facilities. The service providers to be trained will include physicians, nurse/midwives, traditional birth attendants, and community health workers. Family planning will have to be integrated into the curriculum of medical and nurse/midwifery schools.

6.54 There is a need to develop a national IEC strategy, aimed at encouraging people to have small, manageable families, and informing them of methods for doing this, as a matter of urgency. This strategy will then be updated on a regular basis. IEC also needs to be culture and target specific, the main target groups being opinion leaders (political, medical, and religious), males, youth, and women's groups. The use of a variety of media, including folk media (drama and story telling), will ensure that most of the target groups will be reached.

6.55 Finally, there is a need for research and evaluation on attitudes which do not favor family planning use, and on the effectiveness of service delivery approaches. Carrying out and sponsoring such research and evaluation should be a responsibility of the agency charged with coordination of the national family planning program.

5/ World Bank, "Effective Family Planning Programs" (draft, 1992), p. 7

VII. CONCLUSION: TOWARD AN INCREASED AND BETTER ALLOCATED SOCIAL SECTOR EFFORT

Quantitative Aspects

7.1 As discussed in the preceding chapters, in order for progress to be made in improving Uganda's social indicators, it will be necessary for spending on social sectors in Uganda to be both increased and better allocated. This is illustrated in Table VII.1. This scenario is not presented with the conviction that the specific numbers shown are exactly the best ones for Uganda; rather, the purposes are to illustrate the order of magnitude of possible increases/ retargettings, and to stimulate the eventual preparation of more specifically justified scenarios. The numbers have been selected on the basis of a combination of "availability" and "needs" considerations.

7.2 On the "availability" side, Government social sector spending is consistent with the projected evolution of Central Government finance, as se out in Chapter III, Tables III.1 and III.3. The share of GDP absorbed by total social sector spending is assumed to increase by a factor of 1.6. In view of competing needs elsewhere in the economy, an increase in total social sector spending to a level substantially higher than the 11% of GDP shown would be implausible, in the medium term.

7.3 Turning to "needs", in view of the evidence presented in Chapters IV and V of the significant underfunding of both education and health, total spending on both sector is permitted to increase substantially - by about 60% in both cases. Primary education is estimated to cost 3.6% of GDP on the basis of the "bottom up" evidence presented in Chapter IV. The numbers for the post-primary levels are not based on a quantitative "bottom up" approach. Rather, they are consistent with the "residual" available for post-primary after primary has been subtracted from the total resources available for the education sector, and are consistent with the belief, reflected in the White Paper, and supported by the anecdotal evidence presented in Chapter IV, that the post-primary levels are also seriously underfunded. The allocation of future health spending reflects the intention to have substantially larger proportionate increases for public health and preventive spending, as compared with curative spending. One of the most important preventive programs should be family planning - the prevention of unwanted fertility.

7.4 Although the total magnitude of cost recovery (private spending) would remain about the same, there would be a substantial restructuring of its pattern. In particular, there would be more cost recovery from beneficiaries for health (for curative services), and less (in the aggregate) for education. In addition, there would be a substantial restructuring of the pattern of cost recovery within the education sector - much less cost recovery at the primary level, and more cost recovery at the secondary and tertiary levels. Shifting the costs of primary education relatively more onto the Government budget (thus bringing Uganda in line with other countries) is essential for achieving universal primary education, including especially female UPE which is of fundamental importance for achieving results throughout the social sectors.

Table VII.1: PRIVATE AND GOVERNMENT EXPENDITURES ON EDUCATION AND HEALTH, ACTUAL AND PROJECTED (% of GDP)

	Actual 1989/90	Private/ Total	Projected 1994/95	Private/ Total
EDUCATION				
Private Expenditures	2.1		1.5	
Primary	1.9		0.5	
Secondary	0.2		0.5	
Higher	0.0		0.5	
Government Expenditures	1.6		4.5	
Primary	0.6		3.1	
Secondary	0.2		0.3	
Teacher Training	0.2		0.4	
Higher	0.2		0.3	
Other	0.4		0.4	
Education - Total	3.7	57%	6.0	22%
Primary	2.5	76%	3.6	13%
Secondary	0.4	50%	0.7	57%
Teacher Training	0.2	0%	0.4	0%
Higher	0.2	0%	0.7	57%
Other	0.3	0%	0.4	0%
HEALTH				
Private Expenditures	1.8		3.0	
Personal - Curative	1.6		2.8	
Personal - Preventive	0.2		0.2	
Government Expenditures	1.3		2.0	
Personal - Curative	1.0		0.7	
Personal - Preventive	0.1		0.3	
Community interventions	0.1		0.7	
Other	0.1		0.3	
Health - Total	3.1	55%	5.0	54%
Personal - Curative	2.6	62%	3.5	76%
Personal - Preventive	0.3	65%	0.5	33%
Community interventions	0.1	0%	0.7	0%
Other	0.1	0%	0.3	0%
SOCIAL SECTORS - TOTAL	6.8	56%	11.0	36%
Private Expenditures	3.9		4.5	
Government Expenditures	2.9		6.5	

BEST COPY AVAILABLE

Strategic and Institutional Aspects

7.5 In addition to questions of resource mobilization and resource allocation, another important set of questions relates to "Who will provide social services?" In the past, in Uganda as in many other countries, the tendency has been to think in terms of Central Government provision of social services. More recently, there has been a trend toward a more sophisticated approach, which recognizes that the Central Government can make a financial contribution without necessarily providing. There are two aspects to this. One is Decentralization, under which the Central Government still makes the greatest financial contribution, but districts have the lead responsibility for social service provision. The other aspect is nongovernmental provision, especially in such areas as curative health services and vocational/technical training. One advantage of this more sophisticated approach is that the Government can target social sector subsidies more effectively toward poorer districts or poorer households. A decentralized approach can also facilitate greater incentives for efficiency.

7.6 In order to realize the benefits hoped for from this new approach, substantial institutional strengthening will be required at the school level, the health-unit level, and the district level. Central Government ministries will need to be restructured and reoriented to focus more on their enhanced strategic roles. In this context, institutional development assistance being provided in a number of donor-financed projects will be helpful.

Conclusion

7.7 The essential, inter-related policies for achieving improved social indicators in Uganda are universalization of primary education of adequate quality, including especially relaxing the constraints on girls' participation; increased spending on community health interventions and preventive health measures; and making effective family planning services widely available.

TECHNICAL ANNEXES

AND

APPENDICES

DEMOGRAPHIC ESTIMATES AND PROJECTIONS

Demographic data for Uganda are poor: vital registration is lacking, the last census to provide national estimates of population and vital rates was in 1969 (many of the 1980 census results have been lost and the 1991 census has not been fully processed), and only one national demographic survey has been carried out (in 1988/89). Therefore, demographic indicators for Uganda are largely based on models that extrapolate from the 1969 census and the 1988/89 survey.

In this report, demographic estimates and projections are made with a standard cohort-component projection model. Projections of AIDS mortality are made with an epidemiologic simulation model that is linked with the demographic projections model. The purpose of this technical note is to describe the data and assumptions used in the demographic and AIDS projection shown in the report.

1. Demographic Projections

Cohort component projections. The demographic model uses an initial age and sex distribution and applies a sequence of age-specific fertility, mortality, and migration rates to provide future age distributions and other demographic indicators. The computer program for the projections was written by K. Hill (1990).

Base population total and age structure. The initial year for the projections is 1985. The base total population and age structure is a projection to midyear 1985 of the 1969 census age structure with vital rates based on the 1969 census, the 1988/89 DHS and levels of net migration and adult mortality estimated by A. Hill (1992). The base population is consistent with the 1980 and 1991 census total; age structures of the 1980 and 1991 census were not available for the analysis.

Fertility. The total fertility rate (TFR) for the base period (1985-90) is assumed to equal the TFR measured in the DHS for 1985 to 1988. In the declining-fertility scenario, the TFR for the first projection period (1990-95) is assumed to decline by a small quantity to 7.2, after which a sharp decline is assumed. This trend in future fertility levels is based on an analysis of fertility preferences estimated in the DHS. Age-specific fertility rates for the base period are also from the DHS. Future age specific fertility rates are reduced proportionately to match the TFR, but become more concentrated in the middle-ranges (25-34) after fertility drops below 6 (Table 1). In the constant fertility scenario, both the TFR and the age pattern of fertility are assumed to remain unchanged from the 1985-90 levels.

Table 1. Age specific fertility rates, TFR, and mean age at childbearing, by period

Period	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR	Mean Age
1985-90	0.187	0.324	0.318	0.272	0.223	0.096	0.040	7.30	29.1
1990-95	0.184	0.320	0.314	0.269	0.220	0.094	0.039	7.20	28.9
1995-00	0.166	0.289	0.283	0.242	0.199	0.085	0.036	6.50	28.9
2000-05	0.127	0.270	0.283	0.234	0.156	0.075	0.015	5.80	28.8
2005-10	0.104	0.241	0.252	0.203	0.130	0.059	0.011	5.00	28.7
2010-15	0.092	0.226	0.237	0.188	0.116	0.051	0.010	4.60	28.6
2015-20	0.075	0.204	0.215	0.165	0.096	0.039	0.007	4.00	28.4
2020-25	0.058	0.182	0.192	0.141	0.076	0.027	0.004	3.40	28.2

Mortality. Levels of infant mortality (IMR) and child mortality for the base period are from the analysis by Hill (1992) of the 1969 census and the 1988/89 DHS, adjusted for increased mortality caused by AIDS. Overall life expectancy for the base period is estimated from Coale Demeny :North" model life tables selected on the basis of infant and child mortality. Projections of infant mortality rates and overall life expectancy follows a model in which the rate of change in the IMR and e(0) follows a logistic pattern based on the rate of change in previous periods until 2000, and a general model based on observed mortality changes in data from a large number of countries after the year 2000 (Bulatao and Bos, 1989). Table 1 shows life table survivorship ratios, l(x), for males and females. These projections do not incorporate mortality from AIDS, which is projected separately (see below for procedures) and added to mortality from other causes after the no-AIDS mortality projection has been made.

Migration. International net migration is assumed to be negligible in future periods.

Table 2. Projected survivorship ratios, l(x) by age and sex

	1990-95		2000-05		2010-15		2020-25	
	Male	Female	Male	Female	Male	Female	Male	Female
0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1	0.88	0.90	0.90	0.92	0.92	0.93	0.93	0.94
5	0.81	0.83	0.85	0.87	0.87	0.89	0.90	0.91
10	0.78	0.80	0.82	0.84	0.86	0.87	0.89	0.90
15	0.76	0.78	0.81	0.83	0.85	0.86	0.88	0.89
20	0.75	0.77	0.80	0.81	0.83	0.85	0.87	0.88
25	0.72	0.74	0.77	0.79	0.81	0.83	0.85	0.87
30	0.70	0.72	0.75	0.77	0.79	0.81	0.84	0.85
35	0.67	0.69	0.72	0.75	0.77	0.79	0.82	0.84
40	0.65	0.66	0.70	0.72	0.75	0.77	0.80	0.82
45	0.62	0.63	0.67	0.69	0.72	0.74	0.77	0.79
50	0.58	0.60	0.63	0.65	0.68	0.71	0.74	0.77
55	0.54	0.56	0.59	0.61	0.64	0.67	0.69	0.73
60	0.48	0.51	0.53	0.56	0.58	0.62	0.63	0.68
65	0.42	0.44	0.46	0.50	0.50	0.55	0.55	0.61
70	0.33	0.36	0.37	0.41	0.41	0.46	0.44	0.51
75	0.23	0.25	0.27	0.30	0.29	0.34	0.32	0.39
80	0.14	0.15	0.16	0.18	0.17	0.21	0.19	0.25

2. HIV/AIDS Projections

The projections of AIDS mortality are carried out with a model developed by Bulatao (1991) that consists of a numerical simulation of three processes: the spread of HIV, the development of AIDS among those infected with HIV, and the progression from AIDS to death. The three processes are modeled separately for adults (those aged 15 years and over) and children. This epidemiologic model links with the fertility and mortality projections produced by the demographic model to assure that those who die of other causes cannot die of AIDS, to combine mortality from AIDS with mortality from other causes into one life table, and to produce age-sex structures that reflect the combined mortality. Fertility rates are assumed not to be affected by AIDS mortality, but the number of births is and the birthrate are affected by the changes in population size.

Level of HIV infection. A national survey (excluding the Northern and Eastern parts of the country) was carried out in 1987/88 to measure the extent of HIV infection by age and sex using blood samples. The age-sex distribution of HIV positive adults, shown in Figure 2, forms the basis for future projections of HIV and of AIDS mortality. The Bulatao model assumes that future HIV infections occur through sexual contacts, blood transfusions, infected needles, and perinatally between mother and child. Adults are divided into subgroups, which correspond to single and married individuals with various frequencies of new sexual contacts during a specified time period. Given the initial levels of the proportion infected with HIV, the number infected in each subsequent year is calculated subgroup by subgroup. The calculation of the number of seroconversions (O) in one year (t) in a given subgroup (s) of one sexual orientation group (r) is given by

$$O_{rst} = M_{rs,t-1}\, P_{t-1} \{1 - (1 - O_I)\,(1 - O_T)\,(1 - R_{r,t-1}\,[1 - (1 - T_r)^{Sr}])^{Frs}\}$$

where M is the number of HIV seronegatives in the subgroup, P is the likelihood of adult survival from mortality unrelated to HIV, R is the proportion of potential sexual contacts, or agents, who are infective, T is the likelihood of transmission to group r through sexual contact, S is an average number for sex acts per partner, and F is the annual number of new partners. (Different values of F and S are the main factors distinguishing sexual orientation subgroups.) O_I and O_T correspond to the proportion of blood and needled that are infected. For perinatal transmission, the number of infected newborns is the product of the number of women of reproductive age, the proportion of women infected, and the general fertility rate. One out of three infants born to an infected mother is assumed to be infected with HIV.

Progression from HIV to AIDS and to death. The number that progress to AIDS is determined by applying separate schedules for adults and children that depend on year since initial infection, after excluding mortality from other causes. The model therefore keeps track of cohorts of HIV seropositives distinguished by infection date, so that appropriate progression rates can be applied. A logistic function of the form

$$H = k / [2 + \exp(a + bt)]$$

is applied in generating the schedule. The progression from infection to frank AIDS for both adults and children can be modeled with the same functional form, with the parameters set to allow substantially faster progression for children. Progression from AIDS to death is handled in a similar manner as progression to frank AIDS, using a logistic pattern.

Model complications. Several cofactors, with important implications for the effectiveness of interventions, are incorporated in the model. These include condoms use, blood screening, and STDs prevalence. Prevalence of these cofactors can be specified to change over time, and HIV transmission rates may be adjusted with an appropriate multiplier.

Two scenarios. The report shows two different AIDS scenarios. Both scenarios assume that blood screening will improve in the future. The "uncontrolled AIDS" scenario assumes no changes from current levels in behaviors that affect the spread of HIV. In the "AIDS interventions" scenario, condom use is assumed to increase from 1990 levels for those in the highest risk groups, with a corresponding decline in the prevalence of genital ulcers.

Figure 1. Percent HIV seropositive by age and sex, serosurvey 1987/88

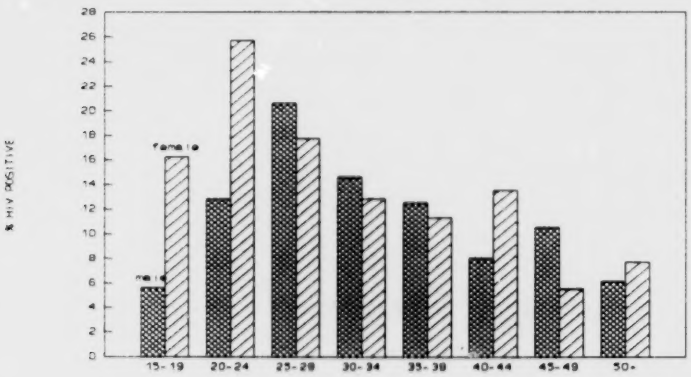
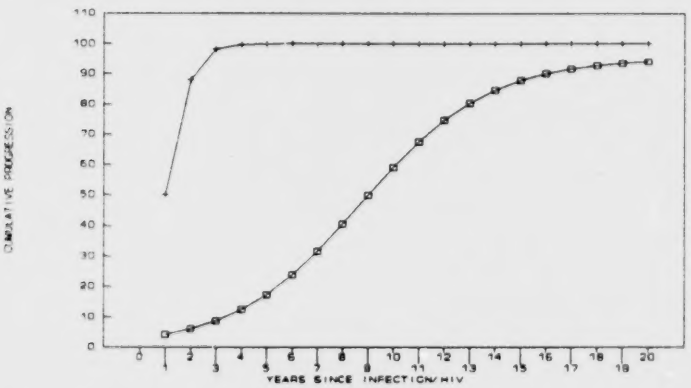


Figure 2. Assumed progression for adults from infection to HIV and death



References:

Bulatao, Rodolfo A. 1991. "The Bulatao Approach: Projecting the Demographic Impact of the HIV Epidemic Using Standard Parameters." Chapter X in: United Nations/World Health Organization (1991) *The AIDS Epidemic and its Demographic Consequences.* New York and Geneva.

Bulatao, Rodolfo A. and Eduard Bos. 1989. *Projecting Mortality for All Countries.* Policy, Planning, and Research Working Papers, No. 337. Population and Human Resources Department, The World Bank.

Hill, Althea. 1992. "The Demography of Uganda". Draft.

Hill, Kenneth. 1990. *PROJ3S - A Computer Program for Population Projections.* Washington, DC: The World Bank.

Table P.1: PROJECTED POPULATION, WITH CONSTANT FERTILITY, IN THE ABSENCE OF AIDS

AGE GROUP	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
TOTAL M+F	14134	16325	19448	23363	28202	34093	41365	50467	61922	76324
MALES										
0-4	1392	1634	2004	2450	2956	3536	4283	5260	6506	8056
5-9	1114	1270	1516	1877	2318	2816	3393	4139	5119	6374
10-14	975	1075	1238	1481	1840	2277	2775	3352	4099	5083
15-19	807	944	1052	1214	1455	1810	2245	2741	3317	4064
20-24	577	760	919	1025	1184	1422	1774	2206	2700	3275
25-29	417	525	736	890	994	1152	1388	1737	2166	2658
30-34	317	373	507	711	861	966	1123	1356	1702	2129
35-39	259	283	359	488	686	834	938	1094	1325	1668
40-44	226	233	271	344	468	661	805	908	1062	1291
45-49	202	205	220	257	327	447	632	772	874	1025
50-54	174	184	192	206	241	307	421	597	732	830
55-59	148	157	168	175	189	221	283	389	552	678
60-64	118	130	138	149	156	168	197	252	346	493
65-69	89	97	108	116	125	131	142	166	212	292
70-74	59	67	74	83	89	96	101	109	128	164
75+	57	62	70	79	89	98	106	113	122	138
TOTAL	6930	8000	9572	11542	13978	16944	20607	25192	30963	38217
FEMALES										
0-4	1383	1622	1988	2425	2920	3489	4219	5174	6391	7902
5-9	1111	1267	1511	1871	2306	2795	3359	4088	5045	6268
10-14	971	1071	1235	1478	1835	2268	2755	3321	4051	5011
15-19	806	940	1048	1210	1451	1806	2237	2723	3288	4020
20-24	596	769	916	1023	1183	1422	1775	2203	2687	3252
25-29	459	558	745	889	995	1155	1392	1741	2167	2651
34	377	428	538	720	862	968	1126	1361	1708	2132
35-39	318	351	410	517	695	834	940	1097	1331	1676
40-44	270	297	335	392	497	669	806	912	1069	1302
45-49	230	253	282	319	375	476	643	778	883	1038
50-54	192	215	238	266	302	356	453	614	745	849
55-59	159	176	198	220	247	281	333	425	579	705
60-64	123	142	157	178	199	224	256	304	390	532
65-69	92	103	119	133	152	171	193	222	265	342
70-74	60	70	79	92	104	120	135	155	179	215
75+	57	64	74	85	101	117	136	157	182	212
TOTAL	7204	8325	9875	11820	14224	17149	20758	25275	30959	38107

BIRTH RATE	50.3	51.9	52.2	51.3	50.3	49.8	49.8	49.9	49.7
DEATH RATE	16.9	16.9	15.5	13.7	12.4	11.2	10.1	9.0	7.9
RATE OF NAT. INC.	3.34	3.50	3.67	3.76	3.79	3.87	3.98	4.09	4.18
NET MIGRATION RATE	-3.9	.0	.0	.0	.0	.0	.0	.0	.0
GROWTH RATE	2.88	3.50	3.67	3.76	3.79	3.87	3.98	4.09	4.18
TOTAL FERTILITY	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300
NRR	2.541	2.597	2.681	2.784	2.855	2.928	3.002	3.078	3.155
e(0) - BOTH SEXES	48.33	49.31	51.04	53.27	54.93	56.64	58.41	60.24	62.12
e(10) - BOTH SEXES	51.66	51.96	52.54	53.43	54.33	55.25	56.19	57.16	58.15
IMR - BOTH SEXES	115.4	109.7	100.0	88.5	83.0	77.6	72.1	66.6	61.1
q(5) - BOTH SEXES	.1931	.1823	.1641	.1429	.1310	.1190	.1070	.0949	.0827
DEP. RATIO 108.6	106.1	106.2	108.7	111.0	110.7	109.3	108.4	109.0	110.4

Table P.2: PROJECTED POPULATION, WITH CONSTANT FERTILITY, AND UNCONTROLLED AIDS

AGE GROUP	1985	1990	1995	2000	2005	2010	2015	2020	2025
TOTAL M+F	14134	16264	19039	22228	25991	30578	36231	43242	52000
MALES									
0-4	1392	1625	1947	2317	2734	3251	3883	4673	5684
5-9	1114	1274	1502	1801	2147	2549	3052	3673	4451
10-14	975	1079	1249	1477	1774	2121	2523	3028	3652
15-19	807	947	1060	1228	1455	1752	2098	2501	3008
20-24	577	762	924	1035	1202	1428	1724	2070	2474
25-29	417	525	735	890	1000	1164	1388	1681	2026
30-34	317	370	495	690	837	943	1101	1316	1600
35-39	259	276	335	438	612	752	850	992	1188
40-44	226	225	243	283	367	522	651	738	861
45-49	202	200	198	203	229	298	435	555	632
50-54	174	180	174	162	158	173	226	341	449
55-59	148	153	152	138	120	109	112	145	232
60-64	118	127	125	117	99	78	61	53	63
65-69	89	96	100	94	83	65	43	24	10
70-74	59	67	70	71	64	55	39	20	2
75+	57	63	69	72	73	68	58	42	20
TOTAL	6930	7968	9378	11014	12955	15326	18243	21852	26351
FEMALES									
0-4	1383	1613	1931	2294	2702	3205	3823	4595	5577
5-9	1111	1272	1498	1794	2135	2527	3017	3623	4383
10-14	971	1077	1247	1474	1769	2110	2504	2996	3606
15-19	806	943	1058	1227	1454	1748	2089	2484	2979
[illegible]-24	596	771	922	1035	1204	1430	1725	2067	2464
[illegible]-29	459	556	737	877	984	1145	1364	1651	1986
30-34	377	420	508	658	779	873	1017	1216	1480
35-39	318	343	375	436	558	664	745	870	1045
40-44	270	292	309	324	367	472	568	640	747
45-49	230	248	261	264	267	297	385	471	532
50-54	192	210	218	217	209	203	221	289	361
55-59	159	173	182	179	170	155	143	148	193
60-64	123	140	147	148	140	128	111	94	90
65-69	92	103	115	117	117	109	96	80	62
70-74	60	70	78	86	87	86	80	69	55
75+	57	65	75	84	94	99	102	99	90
TOTAL	7204	8296	9662	11215	13035	15252	17988	21390	25649
BIRTH RATE	50.3	52.0	52.7	52.7	52.6	52.7	52.7	52.7	
DEATH RATE	17.6	20.5	21.7	21.4	20.1	18.7	17.4	15.8	
RATE OF NAT. INC.	3.27	3.15	3.10	3.13	3.25	3.39	3.54	3.69	
NET MIGRATION RATE	-4.0	.0	.0	.0	.0	.0	.0	.0	
GROWTH RATE	2.81	3.15	3.10	3.13	3.25	3.39	3.54	3.69	
TOTAL FERTILITY	7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300	
NRR	2.529	2.459	2.424	2.451	2.513	2.579	2.649	2.735	
e(0) - BOTH SEXES	46.50	42.55	40.00	39.40	39.88	40.54	41.33	42.44	
e(10) - BOTH SEXES	49.14	44.33	40.79	39.44	39.05	39.00	39.11	39.35	
IMR - BOTH SEXES	118.0	120.7	115.7	106.4	95.0	88.5	83.0	71.8	
q(5) - BOTH SEXES	.1960	.2032	.2029	.1957	.1814	.1687	.1562	.1395	
DEP. RATIO	108.6	106.9	107.9	110.7	112.8	113.3	113.0	112.8	113.0

BEST COPY AVAILABLE

Table P.3: PROJECTED POPULATION WITH CONSTANT FERTILITY, AND AIDS INTERVENTIONS

AGE GROUP	1985	1990	1995	2000	2005	2010	2015	2020	2025
BOTH M+F	14134	16265	19047	22284	26238	31289	37807	46222	57105
MALES									
0-4	1392	1625	1948	2324	2768	3336	4051	4968	6171
5-9	1114	1274	1503	1805	2166	2610	3185	3912	4850
10-14	975	1079	1249	1477	1778	2140	2583	3160	3891
15-19	807	947	1060	1228	1455	1755	2117	2560	3138
20-24	577	762	924	1035	1202	1429	1728	2089	2534
25-29	417	525	735	890	1001	1168	1394	1694	2057
30-34	317	370	495	691	842	955	1123	1352	1655
35-39	259	276	335	441	623	777	896	1068	1302
40-44	226	225	243	285	379	555	713	839	1016
45-49	202	200	198	205	238	326	499	661	791
50-54	174	180	174	164	165	195	279	447	610
55-59	148	153	152	140	126	127	155	235	395
60-64	118	127	125	118	104	93	94	121	194
65-69	89	96	100	95	87	75	67	69	93
70-74	59	67	70	71	66	61	52	47	49
75+	57	63	69	73	74	72	68	62	56
TOTAL	6930	7968	9381	11041	13077	15673	19005	23285	28801
FEMALES									
0-4	1383	1613	1932	2302	2735	3288	3987	4886	6057
5-9	1111	1272	1499	1798	2154	2588	3149	3861	4777
10-14	971	1077	1247	1475	1773	2129	2564	3127	3842
15-19	806	943	1058	1227	1454	1752	2108	2544	3109
20-24	596	771	922	1035	1204	1431	1729	2085	2523
25-29	459	556	737	878	988	1155	1383	1684	2046
34	377	420	509	661	790	901	1072	1308	1618
35-39	318	343	376	439	572	701	819	998	1243
40-44	270	292	309	326	377	504	637	763	948
45-49	230	249	261	265	275	322	446	585	716
50-54	192	210	219	219	217	225	272	395	537
55-59	159	173	182	180	176	173	183	231	351
60-64	123	140	147	149	145	141	141	153	200
65-69	92	103	115	118	119	116	114	116	129
70-74	60	70	78	86	89	90	89	89	92
75+	57	65	75	84	94	102	108	112	116
TOTAL	7204	8296	9666	11242	13161	15617	18802	22937	28304
BIRTH RATE		50.3	51.9	52.7	52.6	52.3	52.0	51.6	51.1
DEATH RATE		17.6	20.4	21.3	20.0	17.1	14.1	11.4	8.8
RATE OF NAT. INC.		3.27	3.16	3.14	3.27	3.52	3.78	4.02	4.23
NET MIGRATION RATE		-4.0	.0	.0	.0	.0	.0	.0	.0
GROWTH RATE		2.81	3.16	3.14	3.27	3.52	3.78	4.02	4.23
TOTAL FERTILITY		7.300	7.300	7.300	7.300	7.300	7.300	7.300	7.300
NRR		2.529	2.462	2.442	2.513	2.646	2.791	2.937	3.091
e(0) - BOTH SEXES		46.51	42.66	40.56	41.28	44.05	47.78	52.12	56.94
e(10) - BOTH SEXES		49.15	44.43	41.33	41.16	42.85	45.69	49.15	52.72
IMR - BOTH SEXES		118.0	120.5	114.7	103.1	88.9	80.2	72.1	59.0
q(5) - BOTH SEXES		.1960	.2027	.1998	.1848	.1593	.1357	.1137	.0887
DEP. RATIO	108.6	106.9	107.9	110.7	112.7	113.1	112.5	111.9	111.6

Table P.4: PROJECTED POPULATION WITH DECLINING FERTILITY, AND AIDS INTERVENTIONS

AGE GROUP	1985	1990	1995	2000	2005	2010	2015	2020	2025
TOTAL M+F	14134	16265	18994	21737	24620	27684	31310	35233	39248
MALES									
0-4	1392	1625	1922	2073	2208	2299	2543	2640	2630
5-9	1114	1274	1503	1782	1936	2083	2193	2455	2575
10-14	975	1079	1249	1477	1755	1912	2062	2176	2441
15-19	807	947	1060	1228	1455	1733	1892	2044	2161
20-24	577	762	924	1035	1202	1428	1706	1867	2022
25-29	417	525	735	890	1001	1168	1394	1673	1839
30-34	317	370	495	691	842	955	1123	1352	1634
35-39	259	276	335	441	623	777	896	1068	1302
40-44	226	225	243	285	379	555	713	839	1016
45-49	202	200	198	205	238	326	499	661	791
50-54	174	180	174	164	165	195	279	447	610
55-59	148	153	152	140	126	127	155	235	395
60-64	118	127	125	118	104	93	94	121	194
65-69	89	96	100	95	87	75	67	69	93
70-74	59	67	70	71	66	61	52	47	49
75+	57	63	69	73	74	72	68	62	56
TOTAL	6930	7968	9355	10766	12264	13860	15736	17754	19808
FEMALES									
0-4	1383	1613	1906	2053	2182	2266	2503	2596	2582
5-9	1111	1272	1499	1775	1925	2066	2168	2422	2536
10-14	971	1077	1247	1475	1751	1903	2047	2153	2411
15-19	806	943	1058	1227	1454	1730	1884	2031	2141
20-24	596	771	922	1035	1204	1431	1706	1864	2014
25-29	459	556	737	878	988	1155	1383	1662	1828
30-34	377	420	509	661	790	901	1072	1308	1597
35-39	318	343	376	439	572	701	819	998	1243
40-44	270	292	309	326	377	504	637	763	948
45-49	230	249	261	265	275	322	446	585	717
50-54	192	210	219	219	217	225	272	395	537
55-59	159	173	182	180	176	173	183	231	351
60-64	123	140	147	149	145	141	141	153	200
65-69	92	103	115	118	119	116	114	116	129
70-74	60	70	78	86	89	90	89	89	92
75+	57	65	75	84	94	102	108	112	116
TOTAL	7204	8296	9639	10970	12356	13824	15574	17479	19440

BIRTH RATE	50.3	51.3	47.6	43.8	39.6	38.2	34.6	30.2
DEATH RATE	17.6	20.3	20.6	18.9	16.1	13.6	11.0	8.6
RATE OF NAT. INC.	3.27	3.10	2.70	2.49	2.35	2.46	2.36	2.16
NET MIGRATION RATE	-4.0	.0	.0	.0	.0	.0	.0	.0
GROWTH RATE	2.81	3.10	2.70	2.49	2.35	2.46	2.36	2.16
TOTAL FERTILITY	7.300	7.200	6.500	5.800	5.000	4.600	4.000	3.400
NRR	2.529	2.429	2.180	2.008	1.822	1.763	1.617	1.446
e(0) - BOTH SEXES	46.50	42.66	40.66	41.47	44.11	47.66	52.06	56.83
e(10) - BOTH SEXES	49.15	44.43	41.33	41.16	42.85	45.69	49.15	52.73
IMR - BOTH SEXES	118.0	120.3	113.9	102.4	88.9	81.0	72.5	59.6
q(5) - BOTH SEXES	.1960	.2026	.1979	.1808	.1581	.1379	.1149	.0905
DEP. RATIO 108.6	106.9	107.3	105.5	99.6	89.1	81.0	73.6	66.

POPULATION PRESSURE ON THE LAND1/

The capacity of Uganda's economy to absorb future population increases will depend largely on the absorptive capacity of agriculture, the source of livelihood to more than 80% of Uganda's population. While Ugandan agriculture can undoutedly provide more jobs as it expands, it is also important to consider relevant constraints.

Clearly Uganda has a large land area -- relative to population -- of 197,000 square kilometers, a relatively large percentage of arable-to-total land (84%), and a seemingly small proportion of land actually under cultivation (25%). Yet, data from the 1963/64 Census of Agriculture reveal that 45% of the population lived on farm holdings less than 5 acres, and that by 1989/90 85% of rural households with farmland had holdings of less than 5 acres, including 62% of households with holdings of less than 2.5 acres (Annex Table 1). Even acknowledging differences in survey methodology between the two periods, the increasing concentration of families at the lower end of the distribution of farm sizes suggests land fragmentation arising from population pressure. The remedy for rising population pressure, therefore, would appear to be expand into new, underdeveloped land areas. The question is: given abundant land, why has this not happened?

Annex Table 1: Distribution of Households with Farmland by Size of Holding, Uganda, 1963/64 and 1989/90[1]

Size Grouping (Acres)	Distribution of Farm Holdings in 1963/64[1] (%)	Distribution of Households in 1989/90[2]	
		Those with Farmland (%)	All Households (%)
Nil	—	—	15.7
.1 - 2.5	20.7	62.2	52.7
2.5 - 5.0	25.3	22.8	19.3
5.0 - 10.0	26.3	10.4	8.8
10.0 - 25.0	19.4	3.3	2.8
25.0 +	8.3	1.3	1.1
Total	100.0	100.0	100.0

Notes. 1.... Source: 1963/64 Uganda Census of Agriculture. 2.... Source: Uganda Budget and Household Survey, 1989/90.

A review of Uganda's agricultural sector concludes that a serious, and perhaps the primary constraint to expansion into new areas has been insecurity. This has inhibited migration from relatively congested areas where people feel safe -- for example, in areas where their own ethnic group prevails -- as well as in-migration to less populated areas that are traditionally occupied by different ethnic groups. Because of this, there are large areas of the country in the North and East producing well below potential. As peace and security return to these areas, output can be expected to increase.

1/Discussion of this issue has been informed by, and is in agreement with, a report in preparation by the World Bank, "Uganda: Agricultural Sector Memorandum", Draft, April 27, 1992.

A second consideration is that much of the unused land is in areas subject to tsetfly and malaria, such as Kabarole, Moima, Masindi, and parts of Mbarara. Malaria is a massive problem that appears to be worsening in many countries in the region -- due to resistance of malaria parasites to chloroquine and other drugs -- to the extent that the direct and indirect costs of an average case of malaria is equivalent to about 12 days output, on average.2/ As Uganda's health system is restored, prospects for reducing malaria and other diseases in inaccessible areas can be expected to increase.

A third constraint to expansion into new areas is limited access to roads, water supply, and other infrastructure, all of which can place constraints on settling people and expanding productivity in such regions. In contrast, much of the most fertile land area in Uganda is concentrated along a narrow band of area with good and stable precipitation, where population is already heavily concentrated, such as Arua, Nebbi, Masak, Mpigi, Mukono, Kasese, Rukungiri, Bushenyi, as well as areas of particularly fertile soils such as Kabale and Mbale which have the highest densities in the country. Again, as peace and security prevail in the country, thus allowing development of roads, transport, communications, schools and health systems in the new areas, the land frontier can be expected to expand.

Past resettlement programs have proven time consuming, often failing to attain targets, and have been attempted with only limited success in a number of areas. The best documented example is that of Kigezi District (now comprising Kabale and Rukungiri Districts) which, under pressure of high population density, sought to move 100,000 of its 300,000 persons between 1945 to 1955 from Southern to Northern Kigezi. Yet, by 1955, only 25,000 people were settled. Efforts continued between 1955-61, with a new target of 80,000. Again, however, the resettled population fell far short of the target, at about 20-30,000 by 1962.3/ Meanwhile, population growth has continued unabated under a high fertility regime in what used to be Southern Kigezi (origin of the resettled population) and Northern Kigezi (destination). Kigezi later became two districts which, by 1969, had a combined population of 647,000, growing to about 800,000 by 1991. Population density climbed from about 71 persons per square kilometer of land in the original Kigezi district to about 187 persons per square kilometer today (244 in Kabale District, and 150 in Rukungiri District). Clearly, alternatives to costly resettlement schemes must be found, such as ways to reinforce spontaneous migration patterns or to channel migration to potentially productive agricultural areas. Including migration as a component of future agricultural strategy in Uganda is bound to expand the land frontier.

In the existing settled areas, bush-fallow practices, a system whereby two or three hectares must lie fallow for every hectare under cultivation to permit soil fertility to regenerate under natural conditions, are commonly employed. This means that close to the maximum amount of land which can be farmed, while still ensuring sustained soil fertility, is

---

2/World Bank, Africa Health Study, Chapter I "Health and Development", Mimeographed, April 1992.

3/Nelson Kasfir, "Land and Peasants in Western Uganda: Busheny and Mbarara Districts", in H.B. Hansen and M. Twaddle, Uganda Now: Between Decay and Development, (London: James Currey Press), 1988; J.B. Kabera, 1991, "Migration and Urbanization in Uganda: Patterns, Trends, Causes and Consequences", (Kampala: Population Secretariat, Ministry of Planning and Economic Development), March 17, 1991.

probably already being cultivated. 4/ Furthermore, incomes tend to be so low that in many of these areas most farm families have very low to zero debt servicing capacity, and are thus unable to purchase new technology. Low incomes and lack of access to credit also tend to increase the propensity to maintain risk aversion, comparatively low production strategies, and to give production of subsistence crops priority over cash crops.5/ Again, migration into new areas, more intensive land preparation and fertilizer use, and mechanization, where appropriate, can help turn these negative conditions around.

Regarding land fragmentation, the advisory committee on Uganda's National Environmental Action Plan points to the joint effects of population pressure and customary land tenure as major causes. Customary land tenure is a practice that does not recognize individual ownership of land, but does recognize the rights of individuals to possess and us land subject to the informal rules of his family, clan and community (NEAP). Fragmentation and unviable parcels are observable in districts such as Kabale, Mbale, Kasese, Rukungiri, Iganga, and parts of Mbarara and Busheny.

Unfortunately, recent studies on labor use are not available. However, the International Labour Organization conducted an in-depth time-budget study of tobacco and cassava farmers in the West Nile and middle Northern part of the country during 1976 that may be as relevant today as then. On small-holder farms not unlike those today in size and technology, it was found that male farm household heads were not active on their farms for up to 50% of the year (220 days, 6hr. work days) in West Nile, and 29% in the middle North region.6/ Comparable figures for other adult males on the farm was 68% and 58%, respectively.

To conclude, pressure of population on the land is already being felt in many parts of the country. Overcoming the constraints to the absorption of additional population on the land, without impoverishment, will not be easy. This is a process which will take time, and will require savings and investment. It is therefore a process which would be facilitated by lower fertility and slower population growth.

4/ Makerere Institute of Social Research, and Land Tenure Center, University of Wisconsin, Land Tenure and Agricultural Development in Uganda,(Kampala: Makerere University), January, 1989.

5/ International Labour Organization, "Labour Use and Productivity and Technological Change in African Smallholder Agriculture: A Case Study of Uganda", (Addis Ababa: ILO, Jobs and Skills Programme for Africa), 1984. World Bank, "Uganda: Agriculture Sector Review: Memorandum", (Joint IDA/Government of Uganda Mission, Aide-Memoir", Mimeographed), October 4, 1991; and World Bank, "Uganda: Agriculture Sector Memorandum: Initiating Memorandum", December 18, 1991. See also, Joseph Atiku, "Population Policy and Planning in Uganda", (Kampala: Population Secretariat, Ministry of Planning and Economic Development, Mimeographed), April, 1991.

6/International Labour Office, 1984, Ibid.

FEMALE PARTICIPATION IN EDUCATION

A. Benefits of Female Education

1. In Uganda, there are no studies available on the economic returns to female education. However, the conclusion from studies in other developing countries is that the costs of schooling "appear to be fully recovered by the increased market productivity or potential wage gains experienced by better educated women over their adult lifetimes . . . the returns tend to be at least as high for women as they are for men." 1/

2. In addition to private economic returns, female education has social returns of increased child survival, improved child health, and lower fertility. Education of Ugandan mothers is positively correlated with knowledge of childhood diseases and nutrition, and a more educated mother is more likely to have a child immunized. 2/ According to UDHS, there was a negative correlation between mother's education and stunting as well as child mortality. Studies on other countries indicate that the effect of father's education on child health is weaker. 3/

3. The UDHS found a negative relationship between women's education and fertility. There are two straightforward reasons for this. First, schooling delays the age at which Ugandan females have their first child delivery. Second, educated women are also more likely to use family planning methods, thus reducing the number of children. It is also possible that some effect of education on fertility may arise from increased earning capacity (and thereby higher "opportunity costs"), but this hypothesis has not been studied in Uganda.

B. Present Status of Female Education

Primary Education

4. Enrollment. Between 1980 and 1990 the number of girls enrolled at primary schools doubled, from 521,884 to 1,050,193. The ratio of girls' enrollment to boys' enrollment increased from 41 percent in 1980 to 45 percent in 1986, but since then has stabilized at about 45 percent (Annex Table 2). Girls' Gross Enrollment Ratio (GER) still remains only 63 percent in contrast to 79 percent for boys in 1990. The Net Enrollment Ratio (NER) is much lower, particularly for girls since in rural areas girls tend to delay schooling until the next sister is able to look after younger siblings.

5. The average ratio of enrolled girls to enrolled boys for any region is positively correlated with the region's average household expenditure. For instance, in 1990 the girls' enrollment outnumbered that of boys in comparatively better-off Kampala and the Central Region, but in the Northern Region there were about 2 enrolled boys to every enrolled girl. It seems therefore reasonable to infer that girls' enrollment increases with household expenditure. Girls' enrollment may be lower, because, from the parents' perspective, the private economic return to girls' schooling may be lower and the opportunity costs higher

---

1/ T. P. Schultz, "Returns to Women's Education", PHRWD Working Paper No. 001, (1989), p. 42.

2/ Abbly J. Nalwanga-Sebina and Edith R. Natukunda, Uganda Women's Needs Assessment Survey, 1988, pp. 103-104.

3/ Herz, B. et al. 1991. "Letting Girls Learn." World Bank Discussion Paper No. 133.

even though the direct costs are not. Parents prefer to educate sons than daughters, partly because sons have better employment opportunities and are expected to support parents as they get older. Also it has been shown that in Uganda, like in other agrarian countries, girls' economic contribution to the families is in general greater than boys. 4/ These factors may weigh heavier for poor families, since poor families rely more on each family member to contribute to the family's survival.

6. Wastage. The dropout rate is much higher for girls, as evidenced by the negative correlation between the ratio of girls enrolled to boys and the grade level. In 1990, for example, girls constituted 46 percent of students in the P1 grade, but only 38 percent of students in the P7 grade.

7. There is large regional disparity in girls' dropout rates. In 1990 the enrollment ratio of girls to boys dropped from .74 in P1 to .29 in P7 in the Northern Region, whereas in Kampala and the Western Region, girls' enrollment ratio did not decrease. Girls from poor families seem to stay at school for a shorter time than those from better-off families. In one survey, 80 percent of mothers having difficulty sending children to school cited school fees as a major problem. 5/ To help keep girls in school in the Northern Region, the Northern Uganda Reconstruction Project (NURP) waives government fees for girls in primary school.

8. In addition to difficulties of financing, girls' higher dropout rate may be caused by early marriage and pregnancy. The Registration of Customary Marriage Decree which stipulates the minimum age of marriage as 16 for girls and 18 for boys is frequently violated, and pregnant girls are expelled from school. The custom of bride price which is not legal but a conventional requirement for marriage encourages early marriage. It also seems to demote a woman's status as she is treated as a husband's property.

9. Little gender disparity is observed in repetition rates, which are high for both boys and girls. In 1988, in government-aided schools the proportion of repeaters to total students (pseudo-repetition rate) is on average 17 percent for boys and 18 percent for girls.

10. Academic Achievement. The results of the Primary Leaving Examination (P.L.E.) determine the entrance to secondary education. Girls do also less well than boys in the P.L.E. in every subject except in English. 6/ Private school data shows that 8 percent of boys and 11 percent of girls failed; 17 percent of boys and 14 percent of girls achieved Division 1, the highest grade. Girls' heavier burden of household responsibilities takes away studying time and increases their absence throughout the school year, leading to poor performance.

11. Female Teachers. In 1990 there were 59,032 male and 25,117 female primary school teachers i.e. the ratio of females to males is .43. A larger proportion of female teachers are trained than male teachers: 69 percent for females and 57 percent for males. However, level

---

4/ Nalwanga-Sebina and Natukunda, op. cit., p. 29.

5/ Nalwanga-Sebina and Natukunda. ibid.

6/ UNICEF. 1989. Children and Women in Uganda.

of training for female teachers is concentrated below Grade III Certification. 7/ For example, the ratio of females to males at Grade I Certification is .82, while .27 at Grade V Certification and .38 at Grade VI Certification.

12. The ratio of female to male teachers shows a large regional variation and parallels the enrollment ratio of girls to boys in a linear way. The regional variation in the male/female teacher ratio seems to confirm the World Bank study indicating that female teachers have a positive impact on girls' enrollment, but the correlation may be insignificant after controlling for regional income variable. 8/ In Kampala female teachers outnumber male teachers; overall ratio of female to male teachers is 1.39. The Northern Region, which has the poorest representation of female teachers, shows the female/male teacher ratio of.18. Furthermore, in the Northern Region, 5 out of the 9 districts do not have any teachers with Certificates above Grade III. In those districts with teachers above Grade III Certificates females are poorly represented; only 1 out of the 9 districts has female teachers. According to the 1989 data for government-aided schools, in all regions the proportion of female teachers is inversely related to age. Yet, the relationship between age and the teacher's certification grade is not known.

13. Female teachers, who represent about one third of the primary school teaching force, are not usually promoted to higher managerial levels, especially if they are not married. Single female teachers are likely to be fired if they become pregnant, whereas a male teacher is not held responsible for fathering a child outside marriage.

14. Curriculum and Textbook. In Uganda education is examination-oriented, and schools have a tendency to focus on the subjects covered in the certificate examinations, which are English, mathematics, science, and social studies. Agriculture is not taught in primary school and is only optional in secondary school, although 80% of the population earns its living in the agricultural sector.

15. The academic orientation of the curriculum may affect some parents' perceptions of the relevance of education for girls. 9/ However, studies in other countries have demonstrated that academic skills such as literacy and numeracy are associated with increased farm productivity. Considering that women account for 70% of the agricultural labor force in Uganda, it would be useful to include at least some instruction in agriculture in the curriculum at the upper primary level, not only for real benefits, but also to help redress the problem of parents' perceptions.

16. Gender stereotyping is embodied in the curriculum materials. For example, in social studies courses offered at the primary school level, all traditional heroes are men. 10/

7/ Certification: Grades I and II have not completed secondary school but have been certified as competent teachers without receiving professional training. Grade III and above are professionally trained as teachers. To be promoted to next grade, additional experience and training are required.

8/ Herz, B. ibid.

9/ A study found that children and parents considered the P.L.E. subjects, except for math, to be irrelevant to girls' future economic activities in rural areas. Parents also complained that primary educated girls lacked skills in agriculture. (Bitamazire, G. N. "A Study of the Occupational Activities of Female Primary School Leavers in Five Selected Villages in Mpigi District," Uganda, 1990.)

10/ Ministry of Women in Development. 1991. Report of the Convention on the Elimination of Discrimination against Women.

Secondary Education

17. Enrollment. At the secondary school level low enrollment is a serious problem for both boys and girls, but more so for girls. In 1990 the GER in the lower secondary level, S1 through S4, was 17 percent for boys and approximately 10 percent for girls; at the upper level, S5 to S6, it was 5.7 percent for boys and 2.1 percent for girls. Overall low enrollment is partly a supply problem. Since there are not enough government-aided secondary schools, many students who pass the P.L.E. can not go on to further studies unless they can afford private school fees.

18. Gender parity worsens at more advanced level of education in a linear way. The ratio of girls to boys is .63 at the lower secondary level and .36 at the upper level of secondary school. Overall, the dropout rate is much lower at secondary school but is still higher for girls than for boys. Without exception, the ratio of girls to boys decreases as the grade level increases.

19. Differences in girls' and boys' participation at the secondary level across regions parallels those at the primary level, i.e. the larger the average household expenditure, the better girls are represented at secondary school. However, the degree of disparity is greater for secondary school. The girls/boys enrollment ratio in the Northern region is much less than half of that in the Central Region for both lower and upper level. It is interesting to note that the Central Region exceeds Kampala in the proportion of girls at secondary school. This seems to imply a large scale of migration of boys to Kampala for secondary schooling, boys being more likely to move than girls. In fact, the number of boys students enrolled for S1 in 1990 outnumbers the previous year's primary graduates for boys in Kampala.

20. Under-representation of Girls in Science Overall science students constitute only 22 percent of upper secondary school students. While the small proportion of science majors is a serious problem for both boys and girls, but it is worse for girls. In the whole country, only 1,348 girls are science majors constituting 18 percent of girls enrolled at an advanced level. The ratio of girls to boys among science majors is 26 percent, while 39 percent for non-science majors. This poor representation of girls is prevalent irrespective of region including Kampala. It leads to a smaller proportion of females in science oriented programmes in higher education. This under-representation in science may be caused by the cultural and economic constraints perceived by girls and their parents, such as implicit gender discrimination in the labor market, social attitudes, and the lack of role models. A study found that secondary school girls in Kampala are not provided any proper guidance or assistance for their study plans and careers. 11/

21. Female Teachers In 1990 there were 12,329 male teachers and 2,413 female teachers at the secondary level, i.e. females constituted about 20 percent of all teachers are female. The proportion of full time female teachers is higher than that of part-time (.23 versus .12). and higher proportion of female teachers are full-time. The proportion of female teachers has a huge regional variation. Overall, females are poorly represented in regions where girls' enrollment is low. This is similar to the primary level with the extent of larger variation. However, it is interesting to note that the Central Region, with the highest girls' enrollment compared to that of boys, does not show the highest female/male teacher ratio due to their extreme concentration in Kampala. In Kampala, for instance, females constitute about 40

11/ Kasante, D. 1983. "A Study of Social Development Guidance Needs for Adolescent Girls in Kampala Schools."

percent of teachers, whereas constitute 19 percent in the Central Region and only 8 percent in the Northern Region. This is somewhat problematic since female teachers have a strong impact on girls' enrollment at the secondary level according to the experience of other countries. 12/

C. Recommendations

22. The preceding analysis clearly illustrates that in Uganda parents have to pay for greater costs of girls' education but society reaps greater gains through externalities. The government should thus relax constraints on female participation in education and take appropriate actions to improve it. It should be also noted that such policies should be devised reflecting the perspective of parents, who decide girls' education.

23. Among the important measures, as discussed in various chapters of the Main Report, that the Government can take to encourage universal enrollment in primary, and greater girls' participation at the secondary level, are to improve quality of education in schools, and abolish tuition fees at the primary level. The Government should also implement an effective family planning program so that girls' mothers can limit the number of children they have, and space them out over longer intervals. At the same time, the following recommendations should be considered:

- Allow girls who are mothers or pregnant to continue their education and return to school.
- Offer more flexible school schedules to help girls combine schooling with chores.
- Enhance the perceived relevance of schooling such as including agriculture in the primary school curriculum.
- Introduce sex education into curriculum to reduce teen-age pregnancies.
- Remove sexual bias or sexual stereotyping in educational materials: Show women in nontraditional roles in textbooks.
- Recruit more female teachers and give them equal promotion opportunities.
- Provide adequate educational guidance and counselling for careers in primary and secondary school.
- Examine the causes of girls' underrepresentation in science and take appropriate actions based on the findings.

24. It should be noted that economic and other social policies are also important as remedies to promote girls' education, complementing education policies. For instance, equal opportunity labor market policies will, by increasing women's earning capacity, raise in the economic returns to female education, and thus encourage parents to send their daughters to school. On the other hand, providing community child care facilities, improving the community's supplies of wood and water can help decrease the opportunity cost of school attendance. Finally, the experience of other countries suggests that single interventions are less effective than a package approach attacking multiple constraints, as has been successful in Korea, China and Sri Lanka. 13/

12/ Herz, B. et al. ibid.

13/ Herz, B. et al. ibid.

ANNEX 1. PRIMARY SCHOOL ENROLLMENT RATIOS OF GIRLS TO BOYS BY GRADE AND DISTRICT

DISTRICT	P1	P2	P3	P4	P5	P6	P7	TOTAL
Kampala	1.06	1.01	1.09	1.16	1.18	1.17	1.11	1.10
Kampala	1.06	1.01	1.09	1.16	1.18	1.17	1.11	1.10
Central	0.99	1.01	1.01	1.03	1.05	1.09	1.02	1.02
Kalangala	0.99	0.73	1.01	1.04	1.09	0.90	1.25	0.96
Luwero	0.96	1.00	0.96	1.02	0.99	0.96	0.85	0.97
Masaka	1.02	1.05	1.10	1.05	1.14	1.12	1.09	1.07
Mpigi	1.03	1.07	1.08	1.10	1.16	1.25	1.19	1.10
Mubende	0.98	0.98	0.96	0.99	0.94	1.00	0.91	0.97
Mukono	0.97	0.96	0.98	1.00	1.03	1.08	0.93	0.99
Rakai	1.00	1.02	1.01	1.03	1.01	1.04	1.06	1.02
Eastern	0.87	0.83	0.80	0.78	0.77	0.73	0.61	0.79
Iganga	0.92	0.91	0.89	0.95	0.89	0.88	0.71	0.89
Jinja	0.97	0.97	1.02	0.93	1.04	1.02	0.90	0.98
Kamuli	0.86	0.86	0.88	0.86	0.84	0.81	0.61	0.83
Kapchorwa	0.88	0.89	0.82	0.79	0.76	0.79	0.56	0.79
Kumi	0.81	0.70	0.66	0.62	0.62	0.57	0.47	0.67
Mbale	0.94	0.94	0.89	0.90	0.87	0.87	0.78	0.90
Soroti	0.83	0.70	0.59	0.54	0.49	0.40	0.29	0.62
Tororo	0.82	0.80	0.78	0.76	0.76	0.71	0.58	0.76
Northern	0.74	0.65	0.60	0.52	0.49	0.42	0.29	0.58
Apac	0.86	0.76	0.70	0.58	0.53	0.49	0.32	0.64
Arua	0.68	0.59	0.55	0.49	0.46	0.39	0.24	0.54
Gulu	0.75	0.67	0.61	0.55	0.49	0.49	0.36	0.61
Kitgum	0.68	0.59	0.52	0.46	0.44	0.33	0.22	0.52
Kotido	0.63	0.53	0.52	0.42	0.45	0.34	0.39	0.52
Lira	0.82	0.70	0.62	0.51	0.53	0.42	0.31	0.59
Moroto	0.71	0.67	0.54	0.64	0.62	0.55	0.63	0.67
Moyo	0.77	0.68	0.66	0.55	0.52	0.40	0.29	0.61
Nebbi	0.72	0.65	0.63	0.56	0.44	0.42	0.32	0.60
Western	0.88	0.86	0.86	0.84	0.83	0.81	0.66	0.84
Bundibugy	0.83	0.76	0.71	0.68	0.64	0.46	0.40	0.70
Bushenyi	0.88	0.88	0.89	0.91	0.84	0.87	0.65	0.87
Hoima	0.90	0.87	0.90	0.90	0.90	0.92	0.86	0.89
Kabale	0.83	0.79	0.77	0.75	0.72	0.67	0.55	0.76
Kabarole	0.86	0.87	0.87	0.82	0.80	0.81	0.73	0.84
Kasese	0.84	0.82	0.83	0.79	0.74	0.71	0.53	0.78
Masindi	0.88	0.81	0.79	0.80	0.86	0.81	0.67	0.82
Mbarara	0.88	0.89	0.88	0.86	0.88	0.83	0.68	0.86
Rukungiri	0.95	0.95	0.95	0.90	0.91	0.86	0.68	0.91
TOTAL	0.86	0.83	0.81	0.79	0.78	0.74	0.61	0.80

Source: Calculated from MOE 1990 School Census.

ANNEX 2. PERCENTAGE OF GIRLS AND STUDENT/TEACHER RATIO AT PRIMARY SCHOOL (government-aided schools)

	80	81	82	84	85	86	87	89*	90*
% of girls	40.9	42.6	42.6	43.5	44	45	45	44.5	44.4
Teacher rati	34	35	36	34	35	33	34	28	27

Source: Planning Unit, Ministry of Education. 1988
* Calculated from MOE data.

ANNEX 3. PSEUDO-REPETITION RATE* AT GOVERNMENT-AIDED PRIMARY SCHOOL BY GRADE AND DISTRICT: 1988

District	BOYS p.1	p.2	p3	p.4	p.5	p.6	p.7	Total	GIRLS p.1	p.2	p3	p.4	p.5	p.6	p.7	Total
Kampala	0.12	0.13	0.15	0.14	0.13	0.14	0.04	0.13	0.13	0.11	0.14	0.12	0.12	0.14	0.03	0.12
Kampala	0.12	0.13	0.15	0.14	0.13	0.14	0.04	0.13	0.13	0.11	0.14	0.12	0.12	0.14	0.03	0.12
Central	0.23	0.18	0.17	0.15	0.14	0.13	0.07	0.17	0.22	0.17	0.16	0.14	0.13	0.13	0.06	0.16
Kalangala	0.27	0.18	0.17	0.23	0.22	0.19	0.14	0.21	0.21	0.15	0.24	0.27	0.25	0.21	0.24	0.22
Luwero	0.23	0.19	0.18	0.15	0.12	0.15	0.05	0.17	0.23	0.19	0.19	0.13	0.15	0.15	0.05	0.17
Masaka	0.21	0.17	0.16	0.14	0.16	0.11	0.08	0.16	0.19	0.16	0.16	0.14	0.13	0.11	0.06	0.15
Mpigi	0.23	0.18	0.18	0.16	0.14	0.13	0.06	0.17	0.22	0.17	0.16	0.15	0.14	0.13	0.05	0.16
Mbende	0.23	0.17	0.18	0.14	0.13	0.12	0.07	0.17	0.23	0.18	0.19	0.15	0.15	0.15	0.06	0.18
Mukono	0.24	0.18	0.16	0.15	0.13	0.11	0.05	0.16	0.24	0.17	0.16	0.13	0.12	0.11	0.05	0.16
Rakai	0.21	0.19	0.17	0.15	0.15	0.13	0.08	0.17	0.19	0.15	0.14	0.13	0.11	0.12	0.08	0.14
Eastern	0.21	0.18	0.19	0.17	0.17	0.17	0.14	0.18	0.20	0.19	0.20	0.18	0.18	0.19	0.13	0.19
Iganga	0.22	0.19	0.19	0.17	0.15	0.17	0.10	0.18	0.21	0.19	0.20	0.17	0.17	0.16	0.09	0.18
Jinja	0.17	0.13	0.14	0.11	0.12	0.10	0.05	0.13	0.16	0.16	0.16	0.15	0.14	0.12	0.05	0.14
Kamuli	0.24	0.20	0.21	0.18	0.17	0.17	0.11	0.19	0.22	0.19	0.22	0.19	0.19	0.20	0.09	0.20
Kapchorwa	0.21	0.16	0.17	0.15	0.16	0.20	0.24	0.18	0.22	0.15	0.15	0.14	0.19	0.23	0.20	0.18
Kumi	0.20	0.19	0.20	0.21	0.20	0.22	0.21	0.20	0.19	0.22	0.20	0.23	0.22	0.28	0.22	0.21
Mbale	0.24	0.20	0.20	0.19	0.18	0.19	0.14	0.20	0.25	0.20	0.21	0.18	0.17	0.19	0.13	0.20
Soroti	0.19	0.16	0.17	0.17	0.16	0.18	0.19	0.17	0.18	0.17	0.20	0.18	0.19	0.24	0.17	0.18
Tororo	0.19	0.17	0.19	0.18	0.17	0.16	0.15	0.18	0.20	0.18	0.21	0.19	0.17	0.18	0.15	0.19
Northern	0.19	0.14	0.14	0.14	0.14	0.17	0.21	0.17	0.19	0.17	0.18	0.17	0.19	0.24	0.26	0.20
Apac	0.23	0.14	0.17	0.18	0.19	0.26	0.28	0.21	0.22	0.17	0.18	0.20	0.23	0.32	0.32	0.21
Arua	0.21	0.14	0.14	0.12	0.12	0.11	0.21	0.16	0.23	0.19	0.19	0.17	0.17	0.20	0.24	0.20
Gulu	0.13	0.14	0.14	0.14	0.13	0.14	0.16	0.14	0.16	0.19	0.18	0.18	0.18	0.20	0.26	0.18
Kitgum	0.17	0.13	0.15	0.16	0.15	0.16	0.21	0.16	0.16	0.16	0.20	0.17	0.21	0.22	0.28	0.17
Kotido	0.25	0.10	0.15	0.23	0.19	0.04	**	0.20	0.26	0.13	0.27	0.06	0.10	**	**	0.20
Lira	0.21	0.16	0.15	0.16	0.16	0.22	0.24	0.19	0.20	0.17	0.18	0.19	0.23	0.26	0.26	0.20
Moroto	0.16	0.19	0.17	0.12	0.17	0.12	0.24	0.17	0.22	0.18	0.21	0.19	0.16	0.26	0.48	0.22
Moyo	0.12	0.14	0.11	0.09	0.09	0.11	0.13	0.11	0.14	0.13	0.14	0.12	0.13	0.15	0.09	0.14
Nebbi	0.17	0.13	0.11	0.09	0.07	0.07	0.12	0.12	0.17	0.13	0.12	0.12	0.11	0.12	0.13	0.14
Western	0.22	0.17	0.16	0.14	0.13	0.13	0.13	0.16	0.22	0.17	0.16	0.15	0.14	0.16	0.12	0.17
Bundibugyo	0.18	0.12	0.11	0.09	0.07	0.06	0.02	0.11	0.19	0.15	0.13	0.09	0.10	0.06	0.01	0.13
Busheoyi	0.28	0.21	0.20	0.17	0.16	0.19	0.26	0.22	0.29	0.22	0.20	0.19	0.19	0.24	0.26	0.23
Hoima	0.13	0.12	0.12	0.11	0.10	0.10	0.10	0.12	0.14	0.13	0.13	0.12	0.12	0.12	0.09	0.13
Kabale	0.23	0.16	0.15	0.12	0.10	0.09	0.11	0.16	0.24	0.18	0.14	0.12	0.11	0.13	0.09	0.17
Kabarole	0.20	0.16	0.14	0.14	0.12	0.11	0.08	0.15	0.19	0.16	0.15	0.13	0.12	0.13	0.04	0.15
Kasese	0.19	0.15	0.16	0.13	0.11	0.09	0.04	0.14	0.21	0.17	0.15	0.12	0.11	0.12	0.04	0.15
Masiodi	0.19	0.17	0.16	0.17	0.14	0.15	0.12	0.16	0.19	0.17	0.17	0.20	0.14	0.15	0.10	0.17
Mbarara	0.24	0.18	0.16	0.15	0.13	0.12	0.12	0.17	0.26	0.19	0.17	0.14	0.14	0.15	0.11	0.18
Rukuogiri	0.26	0.22	0.20	0.18	0.17	0.17	0.17	0.21	0.26	0.20	0.19	0.17	0.17	0.18	0.15	0.20
Total	0.21	0.17	0.16	0.15	0.14	0.15	0.15	0.17	0.21	0.17	0.18	0.16	0.15	0.17	0.12	0.18

Source: Claculated from MOE 1988 data.

* Definition: pseudo-repetition rate = $\frac{\text{number of pupils repeating grade g in year 1988}}{\text{number of pupils in grade g in 1988}}$

** The number of students reported is zero.

ANNEX 4. RESULTS OF THE 1988 P.L.E. (government-aided school)

District	Division 1	Fail	Total Applicants	% Division 1	% Fail
Kampala	1851	190	4839	0.38	0.04
Kampala	1851	190	4839	0.38	0.04
Central	14410	22914	146735	0.10	0.16
Kalangala	0	26	89	0.00	0.29
Luwero	305	243	2282	0.13	0.11
Masaka	480	497	4145	0.12	0.12
Mpigi	1769	680	8717	0.20	0.08
Mubende	224	821	3610	0.06	0.23
Mukono	1451	403	6062	0.24	0.07
Rakai	303	184	2642	0.11	0.07
Eastern	2953	5782	35724	0.08	0.16
Iganga	385	1417	6556	0.06	0.22
Jinja	358	385	2991	0.12	0.13
Kamuli	298	601	3454	0.09	0.17
Kapchorwa	188	134	1439	0.13	0.09
Kumi	121	97	1121	0.11	0.09
Mbale	944	895	8255	0.11	0.11
Soroti	326	305	2489	0.13	0.12
Tororo	333	1948	9419	0.04	0.21
Northern	1986	4248	23870	0.08	0.18
Apac	311	1191	5110	0.06	0.23
Arua	735	600	6047	0.12	0.10
Gulu	313	430	3249	0.10	0.13
Kitgum	117	85	715	0.16	0.12
Kotido	2	1	23	0.09	0.04
Lira	255	1216	4839	0.05	0.25
Moroto	35	16	276	0.13	0.06
Moyo	14	255	913	0.02	0.28
Nebbi	204	454	2698	0.08	0.17
Western	2918	6408	37511	0.08	0.17
Bundibugyo	16	39	650	0.02	0.06
Bushenyi	188	2149	7933	0.02	0.27
Hoima	697	97	2805	0.25	0.03
Kabale	260	728	4879	0.05	0.15
Kabarole	571	237	4453	0.13	0.05
Kasese	309	44	2211	0.14	0.02
Masindi	377	134	1907	0.20	0.07
Mbarara	358	1654	7719	0.05	0.21
Rukungiri	142	1326	4954	0.03	0.27
Total	22267	39352	243840	0.09	0.16

Source: Calculated from 1988 MOE data.

ANNEX 5. RESULTS OF THE 1988 P.L.E.: Private school

Division	Div.1	Fail	Total Applicants	% Division 1	% Fail
Boys	212	100	1282	0.05	0.08
Girls	107	79	748	0.03	0.11
total	319	179	2030	0.03	0.09

Source: Calculated from 1988 MOE data.

ANNEX 6. PRIMARY SCHOOL FEMALE/MALE TEACHERS RATIO BY GRADE AND DISTRICT, 1990

DISTRICT	G1	G2	G3	G4	G5	G6	LI	UT	TOTAL
Kampala	1.00	3.37	1.32	1.83	0.64	0.46	1.24	0.56	1.39
Kampala	1.00	3.37	1.32	1.83	0.64	0.46	1.24	0.56	1.39
Central	1.14	1.21	0.63	0.22	0.25	0.67	0.65	0.61	0.67
Kalangala	0.00	1.25	0.31	*	*	*	0.67	1.67	0.89
Luwero	0.59	0.89	0.48	0.00	0.20	*	0.54	0.56	0.56
Masaka	2.70	2.02	0.88	0.75	0.13	1.00	0.66	0.71	0.90
Mpigi	1.41	1.48	0.77	0.25	0.50	0.50	0.91	0.74	0.85
Mubende	0.43	0.62	0.43	0.00	0.06	0.00	0.40	0.56	0.51
Mukono	1.43	1.16	0.63	0.00	0.13	0.50	0.56	0.58	0.63
Rakai	1.11	0.77	0.33	*	0.50	0.00	0.80	0.55	0.55
Eastern	0.71	0.66	0.54	0.14	0.21	0.50	0.29	0.25	0.41
Iganga	0.63	0.60	0.49	0.14	0.50	0.40	0.34	0.36	0.42
Jinja	1.00	1.70	1.09	0.00	0.31	0.00	0.51	0.75	0.93
Kamuli	0.62	0.68	0.40	0.00	0.08	0.50	0.50	0.38	0.41
Kapchorwa	0.00	0.50	0.42	0.00	*	*	0.35	0.21	0.34
Kumi	1.43	0.52	0.40	*	0.00	*	0.05	0.12	0.32
Mbale	1.48	0.87	0.74	0.20	0.25	1.00	0.26	0.26	0.52
Soroti	0.08	0.32	0.35	0.00	0.00	*	0.03	0.13	0.22
Tororo	0.49	0.68	0.46	0.25	0.13	1.00	0.23	0.20	0.37
Northern	0.83	0.36	0.22	0.44	0.33	0.39	0.14	0.10	0.18
Apac	1.14	0.31	0.16	0.00	*	0.18	0.16	0.00	0.09
Arua	0.27	0.36	0.35	0.00	0.00	1.00	0.13	0.18	0.25
Gulu	4.75	0.39	0.36	0.00	*	*	0.20	0.13	0.29
Kitgum	0.55	0.41	0.17	*	0.00	*	0.19	0.14	0.18
Kotido	0.13	0.18	0.14	*	*	*	0.11	0.12	0.13
Lira	2.40	0.53	0.17	*	*	*	0.09	0.12	0.18
Moroto	*	0.61	0.50	*	*	*	0.19	0.07	0.35
Moyo	0.64	0.35	0.29	*	*	0.33	0.14	0.14	0.23
Nebbi	1.00	0.30	0.21	0.50	0.00	*	0.13	0.12	0.17
Western	0.63	0.54	0.54	0.44	0.10	0.24	0.36	0.30	0.41
Bundibugyo	0.33	0.22	0.11	*	*	*	*	0.14	0.14
Busheni	0.56	0.48	0.55	0.00	0.00	0.00	0.33	0.34	0.46
Hoima	0.79	0.31	0.48	0.40	0.00	0.43	0.35	0.34	0.37
Kabale	0.63	0.53	0.47	0.00	0.33	1.00	0.16	0.20	0.35
Kabarole	0.67	0.65	0.74	0.00	0.00	0.00	0.29	0.36	0.50
Kasese	0.00	0.60	0.52	1.00	0.33	0.00	0.26	0.22	0.32
Masindi	1.50	0.67	0.61	4.00	0.00	0.00	0.57	0.40	0.50
Mbarara	0.52	0.57	0.57	1.00	0.00	0.26	0.42	0.31	0.45
Rukungiri	0.38	0.58	0.49	*	0.00	0.14	0.30	0.22	0.41
TOTAL	0.82	0.67	0.51	0.40	0.27	0.38	0.37	0.31	0.43

Source : Calculated from MOE 1990 School Census

* The number of male or/and female teachers is zero.

ANNEX 7. PROPORTION OF FEMALE TEACHERS BY AGE, 1989 (govt-aided primary)

female/total

District	<20	20-24	25-29	30-39	40-49	50-59	>55	Total
Kampala	0.84	0.72	0.52	0.48	0.70	0.51	0.53	0.76
Kampala	0.84	0.72	0.52	0.48	0.70	0.51	0.53	0.76
Central	0.63	0.50	0.39	0.29	0.24	0.29	0.24	0.51
Kalangala	1.00	0.54	0.53	0.25	0.18	0.40	0.00	0.58
Luwero	0.73	0.52	0.31	0.31	0.13	0.22	0.25	0.46
Masaka	0.69	0.50	0.47	0.31	0.28	0.35	0.32	0.56
Mpigi	0.61	0.54	0.43	0.33	0.31	0.33	0.25	0.55
Mubende	0.60	0.45	0.35	0.25	0.19	0.21	0.11	0.45
Mukono	0.59	0.51	0.36	0.29	0.22	0.34	0.33	0.51
Rakai	0.63	0.42	0.35	0.26	0.22	0.17	0.15	0.45
Eastern	0.59	0.41	0.31	0.22	0.19	0.19	0.10	0.40
Iganga	0.64	0.39	0.34	0.22	0.16	0.17	0.06	0.39
Jinja	0.53	0.57	0.48	0.35	0.32	0.21	0.00	0.59
Kamuli	0.64	0.40	0.26	0.21	0.16	0.12	0.11	0.37
Kapchorwa	0.67	0.42	0.24	0.20	0.11	0.45	0.00	0.37
Kumi	0.57	0.45	0.28	0.20	0.13	0.14	0.07	0.33
Mbale	0.81	0.48	0.37	0.27	0.29	0.38	0.15	0.51
Soroti	0.20	0.27	0.17	0.15	0.14	0.10	0.07	0.24
Tororo	0.49	0.38	0.31	0.22	0.20	0.15	0.10	0.40
Northern	0.36	0.26	0.19	0.15	0.19	0.14	0.08	0.29
Apac	0.71	0.23	0.16	0.10	0.15	0.17	0.00	0.23
Arua	0.17	0.27	0.21	0.16	0.19	0.11	0.09	0.31
Gulu	*	0.47	0.33	0.24	0.28	0.15	0.06	0.49
Kitgum	0.60	0.27	0.14	0.13	0.16	0.07	0.03	0.24
Kotido	*	0.00	0.07	0.00	0.00	0.00	0.00	0.04
Lira	0.33	0.26	0.16	0.14	0.15	0.09	0.10	0.26
Moroto	1.00	0.55	0.26	0.17	0.09	0.00	0.33	0.40
Moyo	0.00	0.13	0.17	0.15	0.33	0.41	0.23	0.36
Nebbi	0.38	0.18	0.13	0.10	0.14	0.18	0.08	0.19
Western	0.56	0.40	0.29	0.19	0.19	0.14	0.10	0.39
Bundibugyo	0.18	0.21	0.13	0.06	0.07	0.09	0.00	0.17
Bushenyi	0.75	0.50	0.36	0.19	0.11	0.08	0.08	0.47
Hoima	0.54	0.32	0.24	0.18	0.15	0.15	0.09	0.33
Kabale	0.46	0.33	0.28	0.18	0.20	0.14	0.08	0.35
Kabarole	0.57	0.45	0.33	0.25	0.29	0.18	0.20	0.44
Kasese	0.44	0.29	0.20	0.17	0.16	0.20	0.00	0.29
Masindi	0.52	0.47	0.29	0.21	0.30	0.15	0.07	0.42
Mbarara	0.71	0.46	0.29	0.19	0.19	0.13	0.06	0.41
Rukungiri	0.35	0.46	0.33	0.21	0.15	0.14	0.03	0.42
Total	0.59	0.43	0.31	0.22	0.21	0.19	0.12	0.42

Source: Claculated from 1989 MOE data.

* The number of teachers is zero.

ANNEX B. THE RATIO OF GIRLS TO BOYS AT SECONDARY LEVEL, 1990

District	S1	S2	S3	S4	Total* Lower Lev	S5	SC5*	Total* S5	S6	SC6*	Total* S6	S5+S6	SC5+SC6	Total* Upper Lev	Total* Secondary
Kampala	0.93	0.84	0.77	0.70	0.81	0.49	0.28	0.43	0.44	0.34	0.41	0.46	0.31	0.42	0.71
Kampala	0.93	0.84	0.77	0.70	0.81	0.49	0.28	0.43	0.44	0.34	0.41	0.46	0.31	0.42	0.71
Central	1.02	1.00	0.94	0.87	0.97	0.88	0.40	0.76	0.59	0.30	0.52	0.72	0.35	0.63	0.93
Kalangala	1.43	0.47	0.71	0.23	0.71	**	**	**	**	**	**	**	**	**	**
Luwero	0.62	0.74	0.87	0.59	0.71	0.71	0.29	0.62	0.58	0.00	0.49	0.64	0.16	0.55	0.70
Masaka	0.90	1.07	0.90	0.84	0.93	0.65	0.27	0.55	0.27	0.34	0.28	0.42	0.30	0.40	0.87
Mpigi	1.24	1.18	1.09	1.12	1.17	1.24	0.70	1.08	0.89	0.43	0.75	1.05	0.56	0.91	1.13
Mubende	0.91	0.73	0.67	0.71	0.76	0.57	0.10	0.49	0.22	0.09	0.20	0.38	0.10	0.34	0.73
Mukono	1.01	0.95	0.84	0.74	0.90	0.73	0.13	0.60	0.57	0.15	0.47	0.65	0.14	0.53	0.86
Rakai	1.12	1.22	1.35	1.00	1.18	1.17	0.42	0.87	1.05	0.53	0.89	1.12	0.46	0.88	1.16
Eastern	0.62	0.58	0.56	0.52	0.58	0.33	0.26	0.31	0.30	0.20	0.28	0.32	0.23	0.30	0.54
Iganga	0.80	0.72	0.75	0.67	0.74	0.77	2.61	1.12	0.86	1.88	1.06	0.82	2.20	1.09	0.77
Jinja	0.65	0.56	0.50	0.46	0.54	0.40	0.12	0.33	0.26	0.12	0.22	0.32	0.12	0.27	0.48
Kamuli	0.63	0.62	0.66	0.62	0.63	0.69	1.05	0.73	0.63	0.00	0.55	0.66	0.53	0.64	0.63
Kapchorwa	0.61	0.42	0.41	0.43	0.48	0.24	0.00	0.18	0.14	0.00	0.11	0.19	0.00	0.15	0.45
Kumi	0.59	0.58	0.58	0.49	0.56	0.23	0.00	0.19	0.26	0.14	0.23	0.25	0.10	0.22	0.53
Mbale	0.72	0.70	0.64	0.63	0.68	0.35	0.10	0.31	0.32	0.16	0.29	0.34	0.13	0.30	0.63
Soroti	0.35	0.43	0.48	0.32	0.39	0.15	0.08	0.13	0.13	0.04	0.10	0.14	0.06	0.12	0.36
Tororo	0.55	0.52	0.46	0.47	0.50	0.17	0.13	0.16	0.18	0.08	0.16	0.18	0.10	0.16	0.45
Northern	0.38	0.36	0.30	0.28	0.33	0.25	0.23	0.24	0.29	0.22	0.27	0.27	0.23	0.26	0.32
Apac	0.47	0.43	0.20	0.32	0.33	0.20	0.11	0.19	0.26	**	0.26	0.23	0.11	0.22	0.33
Arua	0.41	0.36	0.34	0.32	0.36	0.28	0.02	0.22	0.37	0.06	0.29	0.32	0.04	0.25	0.35
Gulu	0.30	0.35	0.34	0.25	0.32	0.14	0.10	0.13	0.20	0.17	0.19	0.17	0.12	0.15	0.30
Kitgum	0.42	0.28	0.36	0.26	0.34	0.06	0.08	0.07	0.11	0.04	0.10	0.09	0.05	0.09	0.32
Kotido	0.33	0.10	0.18	0.22	0.21	0.03	0.08	0.04	**	**	**	0.03	0.08	0.04	0.19
Lira	0.27	0.28	0.24	0.19	0.24	0.17	0.12	0.15	0.26	0.08	0.21	0.22	0.10	0.18	0.24
Moroto	0.36	0.50	0.62	0.37	0.46	0.78	0.00	0.54	0.18	0.00	0.14	0.46	0.00	0.34	0.44
Moyo	0.35	0.37	0.27	0.29	0.33	0.30	**	0.30	0.30	**	0.30	0.30	**	0.30	0.33
Nebbi	0.63	0.55	0.59	0.50	0.58	0.69	0.89	0.78	0.67	0.85	0.75	0.68	0.87	0.76	0.60
Western	0.64	0.62	0.57	0.50	0.59	0.32	0.25	0.30	0.32	0.18	0.30	0.32	0.22	0.30	0.55
Bundibugyo	0.38	0.44	0.34	0.28	0.37	0.10	0.06	0.09	0.09	0.11	0.09	0.09	0.08	0.09	0.35
Bushenyi	0.64	0.61	0.56	0.49	0.58	0.34	0.33	0.34	0.32	0.11	0.30	0.33	0.24	0.32	0.54
Hoima	0.71	0.74	0.72	0.69	0.72	0.66	1.33	0.69	0.39	0.10	0.33	0.49	0.25	0.46	0.70
Kabale	0.43	0.39	0.39	0.29	0.38	0.21	0.10	0.18	0.29	0.07	0.25	0.25	0.08	0.21	0.36
Kabarole	0.71	0.79	0.66	0.58	0.69	0.28	0.11	0.24	0.26	0.10	0.23	0.27	0.11	0.23	0.63
Kasese	0.57	0.57	0.45	0.36	0.50	0.30	0.29	0.29	0.25	0.38	0.26	0.27	0.32	0.28	0.49
Kasindi	0.71	0.51	0.54	0.47	0.57	0.26	0.00	0.22	0.16	0.05	0.14	0.21	0.02	0.18	0.51
Mbarara	0.64	0.61	0.55	0.51	0.58	0.31	0.26	0.30	0.29	0.21	0.27	0.30	0.24	0.29	0.54
Rukungiri	0.84	0.82	0.74	0.66	0.77	0.61	1.30	0.72	0.67	0.71	0.68	0.65	0.92	0.70	0.76
Total	0.67	0.64	0.59	0.54	0.62	0.41	0.27	0.38	0.37	0.25	0.34	0.39	0.26	0.36	0.58

Source: calculated from 1990 MOE School Census.

* definition:

S5/S6: non-science S5/S6 — SC5/SC6: science S5/S6 — Total S5 = S5 + S5

Total S6 = S6 + S6 — Total Lower Lev = S1+S2+S3+S4 — Total Upper lev = Total S5 + Total S6

Total Upper Lev = Total Upper Level + Total Lower Level

** The number of girls and/or boys is zero.

ANNEX 9. FEMALE/MALE TEACHERS RATIO BY TYPE OF WORK AND DISTRICE, secondary school, 1990

DISTRICT	FULL TIME	PART TIME	TOTAL
Kampala	0.78	0.23	0.63
Kampala	0.78	0.23	0.63
Central	0.28	0.12	0.23
Kalangala	0.13	*	0.13
Luwero	0.21	0.09	0.17
Masaka	5.12	2.81	4.30
Mpigi	0.47	0.19	0.38
Muberde	0.16	0.07	0.14
Mukono	3.99	2.23	3.37
Rakai	0.20	0.06	0.15
Eastern	0.23	0.11	0.19
Iganga	0.06	0.15	0.08
Jinja	0.47	0.14	0.41
Kamuli	0.14	0.10	0.13
Kapchorwa	2.89	1.66	2.42
Kumi	0.12	0.13	0.12
Mbale	0.25	0.19	0.23
Soroti	2.03	1.18	1.72
Tororo	0.34	0.06	0.21
Northern	0.10	0.07	0.09
Apac	0.06	0.04	0.05
Arua	0.12	0.08	0.10
Gulu	0.12	0.07	0.10
Kitgum	1.29	0.87	1.17
Kotido	0.11	0.00	0.07
Lira	0.08	0.04	0.08
Moroto	0.70	0.49	0.64
Moyo	0.21	0.17	0.20
Nebbi	0.03	0.07	0.04
Western	0.15	0.11	0.14
Bundibugyo	0.04	0.00	0.03
Busheni	0.18	0.08	0.15
Hoima	0.09	0.06	0.08
Kabale	1.42	1.27	1.36
Kabarole	0.15	0.08	0.12
Kasese	0.11	0.24	0.13
Masindi	0.58	0.48	0.56
Mbarara	0.22	0.14	0.21
Rukungiri	0.13	0.22	0.16
TOTAL	0.23	0.12	0.19

Source : Calculated from 1990 MOE Secondary School Census.

Figure 2.1 Total fertility rate (women 15-44) 0-2 years prior to the survey, Demographic and Health Surveys, 1986-1989

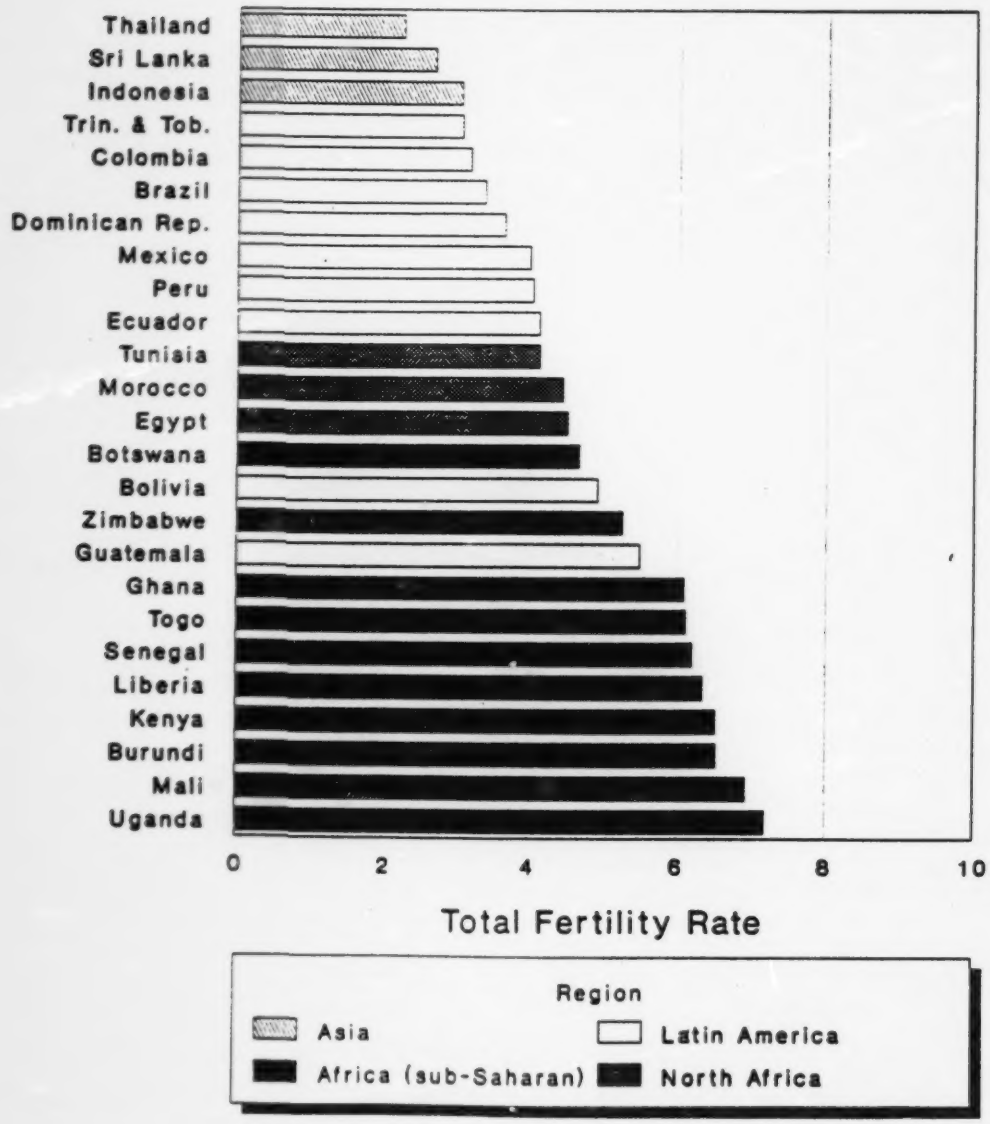
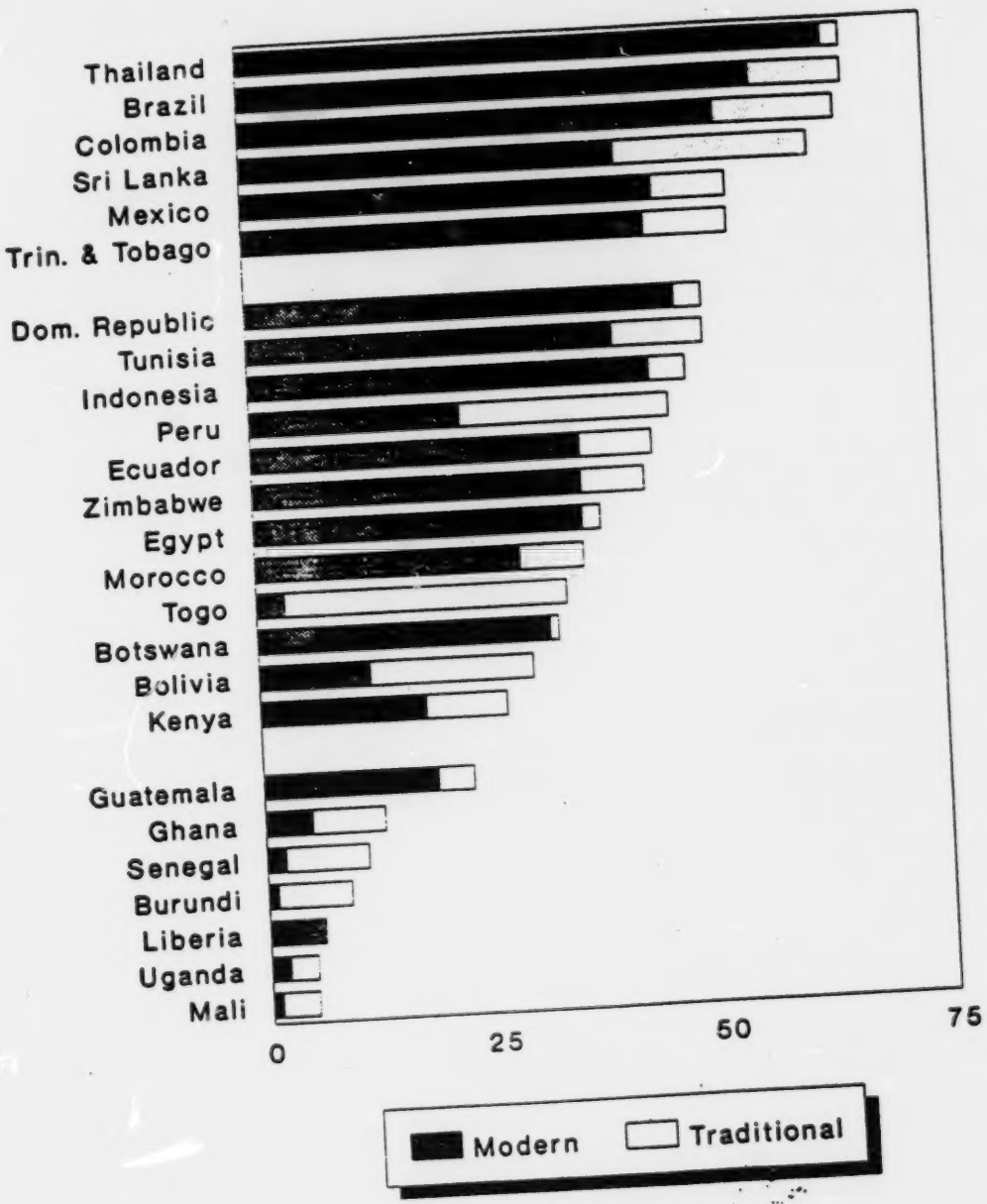


Figure 5.1 Percentage of married women 15-49 who are currently using modern and traditional methods of family planning, Demographic and Health Surveys, 1986-1989



SECTION – 4: EDUCATION

PART B: CURRENT SCHOOLING (All Persons of age 30 and under)

ID No.	Current schooling status & Level	If never attended reasons	If attended earlier		If currently attending during last 12 months		Type of school currently attending	Distance of school from residence (km)	During last 30 schooling days	
			Months before attended	Reasons for dropping out	No. of terms missed	Reasons			No. of days missed	Reasons (code)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

SECTION – 4: EDUCATION

PART C: EDUCATION EXPENSES AND SOURCE OF FUNDS (Persons schooling during past 12 months)

ID No.	Education Expenses during past 12 months for current schooling (shillings)										During last 12 months	
	School fees	Contribution to PTA and donations	Boarding and Lodging	School Uniform	Books and Supplies	Transport to school	Other food & tiffin	Coaching fees	Other expenses	Total	Amount of scholarship received (Shs)	Other major source of funds (code)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

SECTION – 6: HEALTH

PART A : HEALTH CONDITIONS DURING LAST 30 DAYS AND KNOWLEDGE ABOUT DISEASES (All Persons)

LD No.	Days of activities lost	Medical attention code	Reasons for no consult-ation	Days in hospital/ clinic	Medical Expenses						Knowledge about diseases					
					Consult. fees	Hospital/ clinic charges	Medicines etc.	Transport costs	Other expenses	Total	AIDS		Malaria		Diarrhoea	
											Type and source	Control and attitude	Type and source	Control and attitude	Type and source	Control and attitude
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)

SECTION 5 : HEALTH
PART B : FERTILITY, MOTHER-CARE AND FAMILY PLANNING (Women 10 Years and above)

ID No.	Age	Number of births			Number of alive children			During last 12 months					Family planning	
		Total	Live-girls	Live-boys	Girls	Boys	Total	Pregn. status	Pre-natal care status	Post-natal care status	Cost of pre-natal care	Cost of post-natal care	Status	Reasons for not practising
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

SECTION 5 : HEALTH
PART C : VACCINATION (Children up to 10 years)

ID No.	Age (months)	Vaccination status since birth					Vaccination status during last 12 months					Vaccination		Reason for not Vaccinating
		DPT.	POLIO	MEAS	BCG	OTHERS	DPT	POLIO	MEAS	BCG	OTHERS	Source	Cost	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)

Annex E
Community Survey
Questionnaire

SECTION 9 : SOCIAL INFRASTRUCTURE - EDUCATION
(To be answered by one male and female community leader
PART A : LITERACY PROGRAM

Sr.No.	Item	Code
(1)	(2)	(3)
1	Literacy programme for men	
2	Literacy programme for women	
3	Expenses per year in shillings	

Notes
Codes for items (1) and (2):
Yes in the RC1 - 1, Not in the RC1 but within 3 Kms - 2; Beyond 3 Kms - 3.

SECTION 9 : SOCIAL INFRASTRUCTURE - EDUCATION
PART B : PRIMARY SCHOOL EDUCATION

1. Which are the three primary schools from the RC1?

Sr.No.	Name	Distance(Km)	Time taken to reach (minutes)
(1)	(2)	(3)	(4)
1.1			
1.2			
1.3			

2. Classify by degree of importance the reasons for some children not enrolled in school

Sr.No.	Reason	Code-list	Primary school		
			1	2	3
(1)	(2)	(3)	(4)	(5)	(6)
2.1	School too far away	Very important - 1 Important - 2 Not important - 3			
2.2	Official school fees too high				
2.3	PTA fees too high				
2.4	Text books and other expenses too high				
2.5	Children needed at home for work				
2.6	Too few teachers and too many students				
2.7	Lack of text books				
2.8	Lack of proper building				
2.9	Other reasons (Specify) (i)_____				
	(ii)_____				
	(iii)_____				

Annex E
Community Survey
Questionnaire

SECTION 9 : SOCIAL INFRASTRUCTURE - EDUCATION AND CHILD-CARE
PART C : CHILD CARE

1. Is there a Nursery/K.G school or a child-care unit in the RC1? Yes - 1; No - 2. [ ]
2. Common weaning age of the children (in months) [ ][ ]
3. Number of meals commonly served to adults in the community [ ]
4. Number of extra meals served to children [ ]

SECTION 10 : SOCIAL INFRASTRUCTURE - HEALTH (To be answered by one male and female leader)
PART A : HEALTH SERVICES

Sr. No.	Health Services	Availability (code)	Ownership (code)	Dist. Kms.	Transport costs	Initial consultation fees
1)	(2)					
1	Hospital					
2	Health-clinic					
3	Maternity clinic					
4	Doctor					
5	Traditional doctor					
6	Pharmacy					
7	Qualified nurse/midwife					
8	Traditional midwife					
9	Others _____					

Notes:
Availability code
Yes in RC1 - 1; Not in RC1 but in district - 2; Not even in district - 3.
Ownership code
Government - 1; International N.G. - 2; Local non-Profit Institution or N.G.O - 3; Private - 4.

SECTION - 10 SOCIAL INFRASTRUCTURE - HEALTH
PART B : REASONS FOR NOT USING HEALTH CLINIC

Sr.No.	Reasons	Importance Code
(1)	(2)	(3)
1	Clinic too far away	
2	Consultation fees too high	
3	Lack of necessary drugs	
4	Drugs very costly	
5	Staff rude	
6	Staff normally not present	

Notes :
(1) If some families are not using the Health clinic, the importance of reasons are to be coded according to the following codes:
Very important - 1
Important - 2
Not important - 3

BIBLIOGRAPHY

MATERIALS ON UGANDA

Population and Family Planning

Ministry of Health and Institute for Resource Development, Uganda Demographic and Health Survey 1988/89 (1989)

Eastern Africa Department, the World Bank, "Uganda: the Economic Impact of AIDS" (draft, 1991)

William K.A. Agyei and Elsbeth J. Epema, "Sexual Behavior and Contraceptive Use Among 15-24 Year Olds in Uganda", International Family Planning Perspectives, v. 18, March 1992, p. 13-17.

Education

Ministry of Education, Report of the Education Policy Review Commission (1989)

Ministry of Education, Five Year Investment Program (1991)

Uganda Capacity Building Secretariat, "Strengthening the Policy Environment for Investment in University Development in Uganda" (1992)

Eastern Africa Department, the World Bank, "Staff Appraisal Report: Uganda Education Reconstruction and Development Project" (draft, 1992)

Health

Ministry of Health, "Three Year Health Plan: 02 Draft" (draft, March 1992)

Ministry of Health, National Health Personnel Study (1991)

Nutrition

Charles Teller, "Nutrition Situation and Program Assessment" (1989)

Women in Development

Abby J. Nalwanga-Sebina and Edith R. Natukunda, Uganda Women's Needs Assessment Survey 1988

UNICEF, Children and Women in Uganda: a Situational Analysis

Other

Eastern Africa Department, World Bank, "Uganda: Agriculture Sector Memorandum" (draft, 1992)

Eastern Africa Department, World Bank, Public Choices for Private Initiatives: Prioritizing Public Expenditures for Sustainable and Equitable Growth in Uganda (1991)

Eastern Africa Department, World Bank, "Uganda: District Management Study" (draft, 1992)

Eastern Africa Department, World Bank, "Uganda: Managing Public Expenditure" (draft, 1992)

GENERAL MATERIALS

Population and Family Planning

Institute for Resource Development, DHS Comparative Studies:
No. 2, Fertility Levels and Trends (1990)
No. 3, Reproductive Preferences (1991)
No. 5, Unmet Need and the Demand for Family Planning (1991)
No. 6, Knowledge and Use of Contraception (1991)

World Bank, "Effective Family Planning Programs" (draft, 1992)

Nancy Birdsall and Charles C. Griffin, "Fertility and Poverty in Developing Countries", Journal of Policy Modeling (1988), v. 10, pages 29-56.

Susan Cochrane, Valerie Kozel, and Harold Alderman, Household Consequences of High Fertility in Pakistan, World Bank Discussion Paper No. 111 (1990)

Susan Cochrane and others, "The Economics of Family Planning" (World Bank, draft, 1990)

Education

Marlaine Lockheed and Adrian Verspoor, Improving Primary Education in Developing Countries (World Bank, 1991)

World Bank, Primary Education: a World Bank Policy Paper (1990)

World Bank, Vocational and Technical Education and Training: a World Bank Policy Paper (1991)

Barbara Herz and others, Letting Girls Learn: Promising Approaches in Primary and Secondary Education, World Bank Discussion Paper No. 133 (1991)

Health

World Bank, Financing Health Services in Developing Countries, an Agenda for Reform (1987)

Charles C. Griffin, User Charges for Health Care in Principle and Practice, World Bank Economic Development Institute Seminar Paper No. 37 (1988)

Bernhard H. Liese, Paramjit S. Sachdeva, and D. Glynn Cochrane, Organizing and Managing Tropical Disease Control Programs: Lessons of Success, World Bank Technical Paper No. 159 (1991)

Other

World Bank, Sub-Saharan Africa: From Crisis to Sustainable Growth: a Long-term Perspectives Study (1989)

PLANNING AND STATISTICS UNIT

MINISTRY OF EDUCATION
P.O. Box 7063, KAMPALA

(Leave blank)

FORM A: STATISTICAL RETURN FOR PRIMARY SCHOOLS - 1990

Notes:
1) Provide all information as on June 30, 1990 unless otherwise stated.
2) Read all instructions for this form before supplying any information.
3) Ensure completeness and accuracy of information and totals.
4) Send two copies to your DEO/MEO before August 15, 1990.

1. School Particulars:
   1.1 Names of the School _____
   1.2 Postal Address _____
   1.3 District _____ County _____ Sub-county _____
   1.4 Type: (a) Government Aided/Private (b) Boys/Girls/Mixed _____
   1.5 Foundation Body: _____

2. Enrollment by sex and number of streams by class:

Enrollment by Sex and Class	Sex	P1	P2	P3	P4	P5	P6	P7	Total
	Male								
	Female								
	Total								
Number of Streams									

3. Number of special students by category, sex and class:

Category	Sex	P1	P2	P3	P4	P5	P6	P7	Total
Repeaters (those in the same class in 1989)	Male								
	Female								
Transfers from private primary schools	Male								
	Female								
Child. of teachers in Govt. Aided Schools	Male								
	Female								
Handicapped (blind/deaf/dumb/mentally)	Male								
	Female								
Orphans	Male								
	Female								
Refugees	Male								
	Female								
Children of NRA Soldiers	Male								
	Female								

4. Enrollment by age, class and sex:

Age in Years	P1		P2		P3		P4		P5		P6		P7		Total	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Up to 6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
Over 16																
Total																

5. If the school has some classes which are not yet supported by the Government,
(a) List such classes: _____ and provide
(b) Number of students in such classes: Male _____ Female _____ Total _____

6. Number of Established Posts of Teachers _____

7. Full-Time and Part-Time Teachers in Position & Periods taught by them:

Item	Full-time		Part-time	
	Male	Female	Male	Female
Teachers in position				
Periods taught/week				

8. Full-Time Teachers by Training, Qualification and Sex:

Sex	Grade					Tr. Grad.	Sub-Total	Untrained		Total
	I	II	III	IV	V			Lic.	Oth.*	
Male										
Female										
Total										

9. Full-Time Teachers by Academic Qualifications:

Training	Sex	Below P7	Passed P7*	S1-S3	Pass S4*	U.A.C.E.	Grad.	Total
Trained	Male							
	Female							
Untrained	Male							
	Female							

10. Full-Time Teachers by Sex and Age-group:

Age (in years) / Sex	up to 20	20-24	25-29	30-39	40-49	50-54	55 or more	Total
Male								
Female								
Total								

11. Full-Time non-teaching staff by category and sex:

Sex	Office/clerks	Technical	Group Employ.
Male			
Female			
Total			

12. School Receipts and Expenditure for the year 1989/90:

12.1 Amount received from MOE for teachers' salaries _____ Shs
12.2 Amount received from MOE for other salaries/wages _____ Shs
12.3 Any other grant received from MOE _____ Shs
Purpose _____
12.4 Fees excluding PTA contribution received from students/parents _____ Shs
12.5 Total PTA contribution _____ Shs
12.6 Amount realized from fund-raising activities/donations _____ Shs

12.7 Annual rates of PTA contribution per pupil by class:

PTA Rate in	P1	P2	P3	P4	P5	P6	P7
1990							
1989							

12.8 Total expenditure in 1989/90 from Government funds on:
(a) Salaries/allowances of full-time teachers _____ Shs
(b) Salaries/allowances of part-time teachers _____ Shs
(c) Salaries/wages/allowances of other staff _____ Shs
(d) Other items of recurrent nature _____ Shs
Total _____ Shs

12.9 Recurrent expenditure incurred in 1989/90 from PTA funds on:
(a) Full-time teachers' salaries/allowances _____ Shs
(b) Part-time teachers' allowances _____ Shs
(c) Salaries/wages/allowances of other full-time staff _____ Shs
(d) Salaries/wages/allowances of other part-time staff _____ Shs
(e) Instruction material (chalk/books/stationery/etc.) _____ Shs
(f) Non-instructional material (uniforms, etc.) _____ Shs
(g) Electricity, water, telephone _____ Shs
(h) Food for staff/students _____ Shs
(i) Other items in the kitchen (firewood/cleaning, etc.) _____ Shs
(j) Transportation of staff/students/goods _____ Shs
(k) Other (specify _____) _____ Shs

Total 12.9 (a) to (k) _____ Shs

12.10 Development/capital expenditure incurred in 1989/90 on:
(a) Construction of _____ Shs
(b) Major repairs/alterations (roofing, etc.) _____ Shs
(c) Purchase/major repairs of furniture _____ Shs
(d) Purchase/major repairs of vehicles _____ Shs
(e) Other (specify _____) _____ Shs

Total 12.10 (a) to (e) _____ Shs

13. Particulars of full-time teachers:

Sl. No.	Name	Sex	Age in Yrs.	Qualifications		Subjects qualified to teach	Periods taught/ week	Monthly Income		Perks*		MOE Registration Number	Designation (Dept. Head, etc.)
				Academic	Training			Salary	PTA/Oth.	A	T		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													

159 * Indicate by a tick mark if accommodation (A) and/or transportation (T) is provided by the school.

13. Particulars of full-time teachers (continued):

Sl. No.	Name	Sex	Age in Yrs.	Qualifications		Subjects qualified to teach	Periods taught/ week	Monthly Income		Perks*		MOE Registration Number	Designation (Dept. Head, etc.)
				Academic	Training			Salary	PTA/Oth.	A	T		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													
32													
33													
34													

* Indicate by a tick mark if accommodation (A) and/or transportation (T) is provided by the school.

Date of submission _____ Signature of the Headteacher _____

Table FG.1: KEY MACROECONOMIC DATA
(USh billion, except as noted)

	1989/90	1990/91	Est. 1991/92	Projected 1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01
Real GDP (1987/88 prices)	484	507	525	553	587	627						
GDP deflator (1987/88=100)	285.1	377.5	536.7	721.8	811.2	872.1						
Nominal GDP	1381	1914	2817	3992	4756	5422						
Exchange rate (USh/US$)	320	548	986	1187	1291	1353						
Nominal GDP (US$ million)	4316	3493	2857	3363	3684	4007						
Real GDP (1991/92 US$m) (grows at 5% p.a.)			2857	3000	3150	3307	3473	3646	3829	4020	4221	4432
CPI (1987/88=100)	299.4	410.1	583.3	787.5	883.2	948.2						
(rate of increase)	48.1%	37.0%	42.2%	35.0%	12.2%	7.4%						

Memorandum items:

Est. population (Jan. 1, 1992)	16509
GDP per capita (USh)	170634
GDP per capita (US$)	173
Est. employed population	6161
GDP/worker	457231

Source of data: Worksheets underlying the Policy Framework Paper for 1992/93 - 1994/95.

Table FG2: CENTRAL GOVERNMENT BUDGETARY OPERATIONS
(in USh billions)

	1989/90 Actual	--1990/91-- Budget	Outturn	--1991/92-- Financial Program	Outturn	1992/93 Financial Program	1993/94 Proj.	1994/95 Proj.
Revenue and Grants	114	203	207	431	381	592	822	1021
Revenue	95	137	137	204	186	291	467	627
Grants	20	66	70	227	195	302	355	394
Total Expenditure & Lending	175	258	275	488	581	774	981	1166
Recurrent Expenditure	98	140	137	251	323	369	498	617
Statutory expenditure	9	16	26	53	97	124		
Interest payments	9	15	25	50	90	111	114	123
Other	1	1	1	3	7	13		
Recurrent Expenditure of Ministries ("Supply Votes")	89	124	112	198	226	245	383	494
Wages and salaries	13	21	24	36	48	65	89	107
Other	76	103	88	162	178	180	294	387
Development Expenditure	77	111	134	226	250	397	465	529
Section 1	28	22	42	33	23	7	16	18
Section 2	49	89	92	193	227	390	449	511
Local contribution	6	9	10	24	14	33	41	46
Project aid	43	80	82	168	213	357	408	464
Net Lending and Investment	0	7	4	10	9	8	18	20
Overall Deficit	60	55	68	57	201	182	159	145
Financing of Deficit	60	55	68	57	201	182	159	145
External financing (net)	92	63	60	102	137	217	159	174
Gross disbursements	76	83	97	169	132	246	336	374
Domestic financing (net)	-22	3	8	-45	64	-35	0	-29
Memorandum items:								
Locally-controlled Ministerial Expenditure	123	162	167	267	271	293	459	579
Total Ministerial Expenditure	166	242	249	435	484	650	867	1043
Total aid (grants & loan disb.)	96	149	167	396	327	548	691	768
Nominal GDP	1381	1914	1914	2817	2817	3992	4756	5422
				(ratios, in percent)				
Revenue/Total expenditure	54.3	53.1	49.8	41.8	32.0	37.6	47.6	53.8
Aid/Total expenditure	54.9	57.8	60.7	81.1	56.3	70.8	70.4	65.9

Source: IMF staff report on the ESAF program, November 1992.

Table FG.2a: CENTRAL GOVERNMENT BUDGETARY OPERATIONS, AS A PERCENT OF GDP

	1989/90 Actual	--1990/91-- Budget	--1990/91-- Outturn	--1991/92-- Financial Program	--1991/92-- Outturn	1992/93 Financial Program	1993/94 Proj.	1994/95 Proj.
Revenue and Grants	8.3	10.6	10.8	15.3	13.5	14.8	17.3	18.8
Revenue	6.9	7.2	7.2	7.2	6.6	7.3	9.8	11.6
Grants	1.4	3.4	3.7	8.1	6.9	7.6	7.5	7.3
Total Expenditure & Lending	12.7	13.5	14.4	17.3	20.6	19.4	20.6	21.5
Recurrent Expenditure	7.1	7.3	7.2	8.9	11.5	9.2	10.5	11.4
Statutory expenditure	0.7	0.8	1.4	1.9	3.4	3.1		
Interest payments	0.7	0.8	1.3	1.8	3.2	2.8	2.4	2.3
Other	0.1	0.1	0.1	0.1	0.2	0.3		
Recurrent Expenditure of Ministries ("Supply Votes")	6.4	6.5	5.9	7.0	8.0	6.1	8.1	9.1
Wages and salaries	0.9	1.1	1.3	1.3	1.7	1.6	1.9	2.0
Other	5.5	5.4	4.6	5.8	6.3	4.5	6.2	7.1
Development Expenditure	5.6	5.8	7.0	8.0	8.9	9.9	9.8	9.8
Section 1	2.0	1.1	2.2	1.2	0.8	0.2	0.3	0.3
Section 2	3.5	4.6	4.8	6.9	8.1	9.8	9.4	9.4
Local contribution	0.4	0.5	0.5	0.9	0.5	0.8	0.9	0.8
Project aid	3.1	4.2	4.3	6.0	7.6	8.9	8.6	8.6
Net Lending and Investment	0.0	0.4	0.2	0.4	0.3	0.2	0.4	0.4
Overall Deficit	4.3	2.9	3.6	2.0	7.1	4.6	3.3	2.7
Financing of Deficit	4.3	2.9	3.6	2.0	7.1	4.6	3.3	2.7
External financing (net)	6.7	3.3	3.1	3.6	4.9	5.4	3.3	3.2
Gross disbursements	5.5	4.3	5.1	6.0	4.7	6.2	7.1	6.9
Domestic financing (net)	-1.6	0.2	0.4	-1.6	2.3	-0.9	0.0	-0.5
Memorandum items:								
Locally-controlled Ministerial Expenditure	8.9	8.5	8.7	9.5	9.6	7.3	9.7	10.7
Total Ministerial Expenditure	12.0	12.6	13.0	15.4	17.2	16.3	18.2	19.2
Total aid (grants & loan disb.)	7.0	7.8	8.7	14.1	11.6	13.7	14.5	14.2

Source: Based on Statistical Appendix Table FG.2

Table FG.3: CENTRAL GOVERNMENT EXPENDITURE BY SECTOR
(in USh billions)

	1989/90	--1990/91--		--1991/92--		1992/93
	Actual	Budget	Actual	Budget	Actual	Budget
Locally-controlled						
Expenditure	123.1	162.2	167.4	267.2	271.0	293.0
Social Sectors	25.4	39.4	34.7	69.8	62.3	97.8
Education	19.2	27.0	25.0	48.3	49.0	64.1
Health	6.2	12.4	9.7	21.5	13.3	33.7
Defence	52.0	37.0	56.9	55.0	65.4	61.0
Other	45.7	85.8	75.8	142.4	143.3	134.2
Donor Disbursements	42.8	80.1	82.0	167.6	213.0	357.0
Social Sectors	14.9	10.0	35.8	48.8	48.8	58.7
Education	2.7	1.3	9.2	22.5	22.5	33.2
Health	12.2	8.7	26.6	26.3	26.3	25.5
Other	27.9	70.1	46.2	118.8	164.2	298.3
Total Ministerial Expend.	165.9	242.3	249.4	434.8	484.0	650.0
Social Sectors	40.3	49.3	70.6	118.7	111.1	156.5
Education	21.9	28.3	34.2	70.8	71.5	97.3
Health	18.4	21.0	36.4	47.9	39.6	59.2
Defence	52.0	37.0	56.9	55.0	65.4	61.0
Other	73.6	156.0	121.9	261.1	307.5	432.5

Sources: Total expenditure is from Table FG.2. Expenditure on education and health is from Tables FE.6 and FH.6. Defence expenditure is from Government budget documents.

Note: "Other" includes economic services and general public administration.

Note: Consolidated Fund Service refers to expenditures arising from past Government commitments, which therefore are nondiscretionary and are not subject to appropriation by Parliament. Interest on Government debt accounts for the bulk of CFS; pensions are the second largest claim on CFS. Because CFS expenditure cannot be attributed to any particular ministry or other self-accounting agency, it is omitted from the sectoral distribution of expenditure.

Table FG.3a: CENTRAL GOVERNMENT EXPENDITURE BY SECTOR: PERCENT DISTRIBUTION

	1989/90	--1990/91--		--1991/92--		1992/93
	Actual	Budget	Actual	Budget	Actual	Budget
Locally-controlled						
Expenditure	100.0	100.0	100.0	100.0	100.0	100.0
Social Sectors	20.6	24.3	20.7	26.1	23.0	33.4
Education	15.6	16.6	14.9	18.1	18.1	21.9
Health	5.0	7.6	5.8	8.0	4.9	11.5
Defence	42.2	22.8	34.0	20.6	24.1	20.8
Other	37.1	52.9	45.3	53.3	52.9	45.8
Donor Disbursements	100.0	100.0	100.0	100.0	100.0	100.0
Social Sectors	34.8	12.5	43.7	29.1	22.9	16.4
Education	6.3	1.6	11.2	13.4	10.6	9.3
Health	28.5	10.9	32.4	15.7	12.3	7.1
Other	65.2	87.5	56.3	70.9	77.1	83.6
Total Ministerial Expend.	100.0	100.0	100.0	100.0	100.0	100.0
Social Sectors	24.3	20.3	28.3	27.3	23.0	24.1
Education	13.2	11.7	13.7	16.3	14.8	15.0
Health	11.1	8.7	14.6	11.0	8.2	9.1
Defence	31.3	15.3	22.8	12.6	13.5	9.4
Other	44.4	64.4	48.9	60.0	63.5	66.5

Source: Based on Statistical Appendix Table FG.3

Table FG.4:GOVERNMENT-RECOMMENDED MONTHLY INCENTIVE PAYMENT, AND IMPLIED TOTAL COMPENSATION
(USh)

	PSSRC Recommended Scale (Oct.1991 Prices) (A)	Average Salary 1991/92 (B)	Recommended Incentive Payment (C)	Implied Total Monthly Compen. (D)	(D/B)	Implied Total Annual Compen.
U1Special	307,688	24,240	170,069	194,309	8.0	2331708
U1	281,193	15,946	159,148	175,094	11.0	2101128
U2	247,194	10,197	142,198	152,395	14.9	1828740
U3	209,017	9,482	119,721	129,203	13.6	1550436
U4	189,925	7,598	109,396	116,994	15.4	1403928
U5	168,892	6,173	97,631	103,804	16.8	1245648
U6	120,389	5,846	68,726	74,572	12.8	894864
U7	100,404	4,806	57,359	62,165	12.9	745980
U8	83,388	4,151	47,542	51,693	12.5	620316

Source: Ministry of Planning and Economic Development, memorandum to all donors, dated November 25, 1991

Table FE. 1: RECURRENT EXPENDITURE IN THE EDUCATION SECTOR, BY PROGRAM AND ECONOMIC CLASSIFICATION OF EXPENDITURE (in USh millions)

Feb. 24 1993

Ministry/Program	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Projected*	1992/93 Budget
Ministry of Education and Sports		19330		29219		39880
(Check)	13885	19329	17151	29220		38800
Headquarters	1194	8675	7595	13910		25477
Employee costs	205	8311	6661	11736	15974	22843
Primary teachers		6293	4754	8374	11400	16302
Secondary teachers		1615	1220	2149	2926	4184
Teacher education		397	300	528	719	1028
Technical education		275	208	366	498	712
Higher education (Mbarara U.)		129	98	172	234	335
Headquarters		109	82	145	197	282
Other current expenditure	989	364	934	2174		2634
Schools Inspectorate	512	996	1297	3252		57
Employee costs	76	115	100	126		38
Other current expenditure	435	881	1197	3126		19
Teacher Training	2630	2584	2628	2939		3589
Employee costs	514	245	141	85		196
Other current expenditure	2116	2339	2487	2854		3393
Schools and Colleges	409	145	105	174		89
Employee costs	126	57	76	86		22
Other current expenditure	283	88	29	88		67
Primary Education	3839	1080	385	1411		1353
Employee costs	3619	119	109	63		26
Other current expenditure	220	961	276	1348		1327
Secondary Education	2801	2800	2717	2264		2868
Employee costs	1150	212	378	16		6
Other current expenditure	1651	2588	2339	2248		2862
Technical and Commercial Education	1740	1795	1471	2078		2726
Employee costs	276	277	91	71		52
Other current expenditure	1464	1518	1380	2007		2674
Higher Education (Mbarara U.)	420	591	489	1748		1142
Employee costs	92	101	221	60		2
Other current expenditure	328	490	268	1688		1140
Teaching Service Commission	340	663	464	934		656
Employee costs	240	293	170	333		143
Other current expenditure	100	370	294	501		513
Sports Department	0	0	0	610		843
Employee costs	0	0	0	4		3
Other current expenditure	0	0	0	606		840
Makerere University	2383	3571	3562	6286		8184
Employee costs	823	1442	1647	2218		4132
Other current expenditure	1560	2129	1915	4068		4052
Ministry of Local Govt.-Education	1760	1760	1760	9017		10496
Employee costs		1		16		2
Other current expenditure		1763		9001		10494
TOTAL (excluding Sports Dept.)	18028	24661	22473	43912		57717
Memorandum Items:						
Total Recurrent expenditure on:						
Primary education	5599	9133	6899	18802		28151
Secondary education	2801	4415	3937	4413		7052
Teacher training	2630	2981	2928	3467		4617
Technical & commercial ed.	1740	2070	1679	2444		3438
Higher education	2803	4291	4149	8206		9661
Other	2455	1771	2881	6579		4798

* See Notes on next page.

BEST COPY AVAILABLE

Note: In the 1991/92 and 1992/93 budget documents, all staff salaries and professional allowances are shown as a lump sum under Program 01, Headquarters, with none under the substantive education programs. This practice, which is inconsistent with sound budgeting principles, reflects the lack of an agreed Establishment. Employee costs are allocated among the programs only ex post, as been done in the accounts for 1989/90.

For 1990/91, 1991/92, and 1992/93, the disaggregations of the wage bill among the levels of the education system are mission estimates, derived by applying Percent Distributions (e.g., 71% for primary, 18% for secondary) from the monthly payroll displayed in Table E.12.

Note: The Sports Department was brought into the Ministry of Education at the beginning of the 1991/92 fiscal year.

Note: In the 1992/93 budget document, two additional "programs" have been created under the MOES vote: Uganda National Examinations Board, and National Curriculum Development Center. Previously these were part of the "Headquarters" program. In Table FE.1, these functions continue to be treated as part of "Headquarters".

Table FE. 2: SECTION 1 CAPITAL EXPENDITURE IN THE EDUCATION SECTOR, BY PROGRAM AND OBJECT OF EXPENDITURE (in USH millions)

	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget
Ministry of Education	1033	1670	1691	1733		85
(Check)				(1732)		
Headquarters	22	1020	1002	21		0
Construction	13	20	2	0		
Equipment	9	1000	1000	21		
Schools Inspectorate	0	0	0	120		65
Construction	0	0	0	76		50
Equipment	0	0	0	44		15
Teachers Training	45	40	41	214		20
Construction	45	30	33	40		0
Equipment	0	10	8	174		20
Secondary Education	356	100	100	714		0
Construction	34	100	100	180		
Equipment	322	0	0	534		
Technical and Commercial Education	0	10	3	113		0
Equipment	0	10	3	113		
Higher Education - Mbarara U.	610	500	545	550		0
Construction	610	500	545	550		
Makerere University	N/A	417	740	321		0
Construction		357	710	249		
Equipment		60	30	72		
Ministry of Local Govt.-Education	N/A	0	N/A	210		0
Construction		0		210		
TOTAL	1033	2087	2431	2264		85

Table FE. 3: LOCALLY-CONTROLLED SECTION 2 EXPENDITURE IN THE EDUCATION SECTOR BY PROJECT AND ECONOMIC CLASSIFICATION OF EXPENDITURE (in USh millions)

Project	Code/ Donor	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget
Ministry of Education (excl. Sports)		122	90	84	974		4352
School Health Education	SI-76(N)	0	23	0	110		348
Construction	UNICEF		0		0		0
Equipment and vehicles			0		0		50
Foreign salaries			0		0		0
Local salaries & allow.			0		0		0
Other current expend.			23		110		298
Mandela National Stadium	SI-71(N)	0	0	0	227		200
Construction	China				0		200
Equipment and vehicles					0		0
Foreign salaries					0		0
Local salaries & allow.					0		0
Other current expend.					227		0
Strengthening Plan. Unit	PA-10	0	5	N/A	0		0
Construction	ADB		0	N/A			
Equipment and vehicles	UNESCO		0	N/A			
Foreign salaries			0	N/A			
Local salaries & allow.			5	N/A			
Other current expend.			0	N/A			
4TH IDA Education Project	SI-63(N)	122	46	46	335		300
Construction	IDA	0	1	0	0		0
Equipment and vehicles		0	0	0	0		0
Foreign salaries		0	0	0	0		0
Local salaries & allow.		3	2	9	1		3
Other current expend.		119	43	37	334		297
World Food Programme/BEIRD	SI-27	0	26	26	302		134
Construction	WFP		0	0	0		0
Equipment and vehicles			14	0	0		100
Foreign salaries			0	0	0		0
Local salaries & allow.			1	2	3		7
Other current expend.			11	24	299		27
Population Education	SI-25(C)	0	13	0	0		16
Construction	UNFPA		7				0
Equipment and vehicles			1				2
Foreign salaries			0				0
Local salaries & allow.			0				0
Other current expend.			5				12
Curriculum Devel. (BEND)	SI-25(B)	0	0	0	40		109
Construction	UNDP				7		0
Equipment and vehicles					0		0
Foreign salaries					0		0
Local salaries & allow.					0		45
Other current expend.					33		64
Curriculum Devel. (STEPU)	SI-25	0	0	12	43		91
Construction	UK			0	0		10
Equipment and vehicles				0	0		16
Foreign salaries				0	0		0
Local salaries & allow.				12	1		2
Other current expend.				0	42		63
Rehab. of UTCs and UCCs	SI-24	0	0	0	0		209
Construction	ADB						156
Equipment and vehicles							23
Foreign salaries							0
Local salaries & allow.							0
Other current expend.							30
Rehab. of NTCs and ITEK	SI-23	0	0	0	0		100
Construction	ADB						21
Equipment and vehicles							79
Foreign salaries							0
Local salaries & allow.							0
Other current expend.							0

Rehab. of PTCs	SI-22	0	0	0	26	250
Construction	IDA				0	0
Equipment and vehicles					0	250
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					26	0
Nabende Teacher Educ.	SI-00(M)	0	0	0	18	26
Construction	Action				0	0
Equipment and vehicles					0	10
Foreign salaries					0	0
Local salaries & allow.					0	7
Other current expend.					18	9
WFP/KARAMOJA	SI-00(K)	0	0	0	100	213
Construction	WFP				0	0
Equipment and vehicles					0	144
Foreign salaries					0	0
Local salaries & allow.					1	8
Other current expend.					99	61
Rehab. of Tech. Schools	SI-01	0	0	0	0	90
Construction	GOU					90
Equipment and vehicles						0
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						0
Rehab. of Second. Schools	SI-03	0	0	0	0	473
Construction	GOU					473
Equipment and vehicles						0
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						0
Curriculum Devel.	SI-25(N)	0	0	0	0	39
Construction	GOU					26
Equipment and vehicles						13
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						0
Ed. Sector Dev. Project	SI-26(N)	0	0	0	0	49
Construction	IDA					0
Equipment and vehicles						32
Foreign salaries						0
Local salaries & allow.						5
Other current expend.						12
Mbarara Univ of Sci & Tech	SI-64	0	0	0	0	1775
Construction	GOU					1755
Equipment and vehicles						20
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						0
Special Education	SI-77(N)	0	0	0	0	130
Construction						0
Equipment and vehicles						7
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						123
Makerere University			145		1023	1530
Training for Demographers	SI-46(N)		0		8	11
Construction	UNFPA				0	0
Equipment and vehicles					0	0
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					8	11
Strengthening PHC Serv.	SI-28(F)		0		13	242
Construction	UNICEF				0	0
Equipment and vehicles					0	15
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					13	227

Ren./Const. of Building	SI-05(N)		0		220	150
Construction	USAID				0	0
Equipment and vehicles	EEC				0	0
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					220	150
Ren./Const. of Building	SI-05(N)		0		156	194
Construction	Japan				0	50
Equipment and vehicles	EEC				0	0
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					156	144
Re-equip. of Univ. Plant	SI-04(N)		0		300	251
Construction	UNECA				0	0
Equipment and vehicles	ADB				28	242
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					272	9
Re-equipment	SI-04(N)		125		116	110
Construction	Germany		125		116	110
Equipment and vehicles			0		0	0
Foreign salaries			0		0	0
Local salaries & allow.			0		0	0
Other current expend.			0		0	0
Rehab. of Infrastructure	SI-04(A)		20		202	264
Construction	Germany		20		17	0
Equipment and vehicles	UNDP		0		9	0
Foreign salaries	EEC		0		0	0
Local salaries & allow.			0		9	0
Other current expend.			0		167	264
Training for Econ. Policy	PA-27(N)		0		0	86
Construction	UNDP					0
Equipment and vehicles	EEC					15
Foreign salaries						0
Local salaries & allow.						30
Other current expend.						41
ASAC Investment Component	AG-90(7)		0		8	90
Construction	IDA				7	87
Equipment and vehicles					0	1
Foreign salaries					0	0
Local salaries & allow.					0	0
Other current expend.					1	2
Capitalisation of New Dept	SI-06(N)					85
Construction	GOU					0
Equipment and vehicles						85
Foreign salaries						0
Local salaries & allow.						0
Other current expend.						0
Hydrogeology Uganda	SI-98(B)	0	0	0	0	47
Construction	GOU					0
Equipment and vehicles	IDRC					25
Foreign salaries						0
Local salaries & allow.						11
Other current expend.						11
Ministry of Local Government			0		137	472
			-		---	---
Rehab. of Primary Schools	SI-02		0		137	472
Construction	Japan				113	391
Equipment and vehicles					0	0
Foreign salaries					0	0
Local salaries & allow.					24	81
Other current expend.					0	0
Ministry of Planning and Econ. Devt.						
PAPSCA - Primary Schools	SI-86					
Construction	IDA					
Equipment and vehicles						

Foreign salaries					
Local salaries & allow.					
Other current expend.					
TOTAL (excluding Sports)	122	235	84	2134	6354
Memorandum items:					
Total Section 2 local expenditure on:					
Primary education	122	90	84	1067	2110
Secondary education	0	0	0	0	473
Teacher training	0	0	0	44	376
Technical & commercial ed.	0	0	0	0	90
Higher education		145		1023	3305
Other	0	0	0	0	0

Note: Projects are listed in the order in which they appear in the 1991/92 budget document.

Table FE. 4: LOCALLY-CONTROLLED CENTRAL GOVERNMENT EXPENDITURE IN THE EDUCATION SECTOR, BY LEVEL OF EDUCATION (in USh millions)

	1989/90 Actual	-- 1990/91 -- Budget	Actual	1991/92 Budget	1992/93 Budget
Primary Education	5721	9223	6983	20079	30261
Recurrent	5599	9133	6899	18802	28151
Section 1	N/A	0	N/A	210	0
Section 2 - Local Cont.	122	90	84	1067	2110
Secondary Education	3157	4515	4037	5127	7525
Recurrent	2801	4415	3937	4413	7052
Section 1	356	100	100	714	0
Section 2 - Local Cont.	0	0	0	0	473
Teacher Training	2675	3021	2969	3725	5013
Recurrent	2630	2981	2928	3467	4617
Section 1	45	40	41	214	20
Section 2 - Local Cont.	0	0	0	44	376
Technical and Commercial Education	1740	2080	1682	2557	3528
Recurrent	1740	2070	1679	2444	3438
Section 1	0	10	3	113	0
Section 2 - Local Cont.	0	0	0	0	90
Higher Education	3413	5353	5434	10100	12966
Recurrent	2803	4291	4149	8206	9661
Section 1	610	917	1285	871	0
Section 2 - Local Cont.	0	145	0	1023	3305
Other	2477	2791	3883	6720	4863
Recurrent	2455	1771	2881	6579	4798
Section 1	22	1020	1002	141	65
Section 2 - Local Cont.	0	0	0	0	0
TOTAL	19183	26983	24988	48309	64156
Recurrent	18028	24661	22473	43912	57717
Section 1	1033	2087	2431	2263	85
Section 2 - Local Cont.	122	235	84	2134	6354
(Total - check)	19183	26983	24988	48309	64156

Note: The following data are not available, and therefore are excluded:
Makerere University Section 1 actual for 1989/90.

Table FE. 5: DONOR-FINANCED SECTION 2 EXPENDITURE IN THE EDUCATION SECTOR, BY PROJECT AND ECONOMIC CLASSIFICATION OF EXPENDITURE
(in USh millions)

(US$ thousands)

Project	Code/ Donor	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget	Level (MOE only)	1989/90 $Actual	1990/91 $Actual
Ministry of Education		2282	1067	5488	12968		26733		7141	10018
School Health Education	SI-76(N)	338	247	165	907		973	Primary	1059	302
Construction	UNICEF		143	0	0		0			0
Equipment and vehicles			0	142	0		0			259
Foreign salaries			15	15	87		61			27
Local salaries & allow.			9	9	0		0			16
Other current expend.			80	0	820		912			0
Mandela National Stadium	SI-71(N)	0	0	39	1299		2980	(n.a.)	0	71
Construction	China			0	1299		2980			0
Equipment and vehicles				22	0		0			40
Foreign salaries				0	0		0			0
Local salaries & allow.				0	0		0			0
Other current expend.				17	0		0			31
Strengthening Plan. Unit	PA-10	0	78	N/A	0		0	Other	0	N/A
Construction	ADB		7	N/A						N/A
Equipment and vehicles	UNESCO		14	N/A						N/A
Foreign salaries			43	N/A						N/A
Local salaries & allow.			6	N/A						N/A
Other current expend.			8	N/A						N/A
4TH IDA Education Project	SI-63(N)	1589	450	716	1738		2617	Primary	4973	1307
Construction	IDA		102	0	0		0			0
Equipment and vehicles			26	42	61		0			76
Foreign salaries			110	175	256		775			320
Local salaries & allow.			0	0	0		0			0
Other current expend.			212	499	1422		1842			911
World Food Programme/BEIRD	SI-27	320	200	4381	3507		4172	Primary	1000	7998
Construction	WFP		0	0	0		0			0
Equipment and vehicles			0	0	0		0			0
Foreign salaries			0	0	0		0			0
Local salaries & allow.			0	0	0		0			0
Other current expend.			200	4381	3507		4172			7998
Population Education	SI-25(C)	0	92	88	302		551	Primary	0	161
Construction	UNFPA		21	0	0		0			0
Equipment and vehicles			2	0	0		29			0
Foreign salaries			21	54	0		155			99
Local salaries & allow.			24	11	0		36			20
Other current expend.			24	23	302		331			42
Curriculum Devel. (BEND)	SI-25(B)	35	0	137	520		562	Primary	109	250
Construction	UNDP			0	0		0			0
Equipment and vehicles				0	0		126			0
Foreign salaries				68	520		191			125
Local salaries & allow.				68	0		0			125
Other current expend.				0	0		245			0
Curriculum Devel. (STEPU)	SI-25	0	0	N/A	34		37	Primary	0	N/A
Construction	UK			N/A	0		0			N/A
Equipment and vehicles				N/A	7		0			N/A
Foreign salaries				N/A	5		7			N/A
Local salaries & allow.				N/A	0		0			N/A
Other current expend.				N/A	22		30			N/A
Rehab. of UTCs and UCCs	SI-24	0	0	0	1915		1966	Tech.	0	0
Construction	ADB				930		1582			
Equipment and vehicles					917		0			
Foreign salaries					0		0			
Local salaries & allow.					0		0			
Other current expend.					68		385			
Rehab. of NTCs and ITEK	SI-23	0	0	0	277		1966	TT	0	0
Construction	ADB				166		1532			
Equipment and vehicles					68		0			
Foreign salaries					0		0			
Local salaries & allow.					0		0			
Other current expend.					42		434			

Rehab. of PTCs	SI-22	0	0	0	1351	3576	TT	0	0
Construction	IDA				1351	0			
Equipment and vehicles					0	3576			
Foreign salaries					0	0			
Local salaries & allow.					0	0			
Other current expend.					0	0			
Mebende Teacher Educ.	SI-00(N)	0	0	0	177	135	TT	0	0
Construction	Action				0	0			
Equipment and vehicles					12	0			
Foreign salaries					0	55			
Local salaries & allow.					0	0			
Other current expend.					165	80			
WFP/KARAMOJA	SI-00(K)	0	0	0	2240	3338	Primary	0	0
Construction	WFP				0	0			
Equipment and vehicles					0	0			
Foreign salaries					0	0			
Local salaries & allow.					0	0			
Other current expend.					2240	3338			
Ed. Sector Dev. Project	SI-26(N)	0	0	0	0	4778	Primary		
Construction	IDA					381			
Equipment and vehicles						919			
Foreign salaries						1788			
Local salaries & allow.						54			
Other current expend.						1636			
Special Education	SI-77(N)	0	0	0	0	1616	Primary		
Construction	Denmark					1340			
Equipment and vehicles						34			
Foreign salaries						0			
Local salaries & allow.						0			
Other current expend.						232			
Wose School Farm Project	SI-99	0	0	0	0	446	Primary		
Construction	EEC					351			
Equipment and vehicles						0			
Foreign salaries						57			
Local salaries & allow.						0			
Other current expend.						38			
Makerere University		444	224	3677	8197	4922		1389	6712
Training for Demographers	SI-46(N)	0	0	0	116	173		0	0
Construction	UNFPA				0	0			
Equipment and vehicles					0	0			
Foreign salaries					0	0			
Local salaries & allow.					0	0			
Other current expend.					116	173			
Strengthening PHC Services	SI-28(F)	0	0	0	224	66		0	0
Construction	UNICEF				0	0			
Equipment and vehicles					0	0			
Foreign salaries					67	66			
Local salaries & allow.					0	0			
Other current expend.					157	0			
Ren./Const. of Building	SI-05(N)	0	0	0	1824	0		0	0
Construction	USAID				0				
Equipment and vehicles	EEC				0				
Foreign salaries					0				
Local salaries & allow.					0				
Other current expend.					1824				
Ren./Const. of Building	SI-05(N)	0	0	561	1755	1507		0	1025
Construction	Japan			0	0	0			0
Equipment and vehicles	EEC			0	0	0			0
Foreign salaries				0	0	0			0
Local salaries & allow.				0	0	0			0
Other current expend.				561	1755	1507			1025
Re-equip. of Univ. Plant	SI-04(N)	0	0	0	2020	1222		0	0
Construction	UNECA				0	0			
Equipment and vehicles	ADB				822	0			
Foreign salaries					0	0			
Local salaries & allow.					0	0			

Other current expend.					1198	1222			
Re-equipment (Vet. Med.)	SI-04(M)	284	160	156	887	601		889	284
Construction	Germany		64	18	39	358			33
Equipment and vehicles			96	54	253	0			99
Foreign salaries			0	54	476	0			99
Local salaries & allow.			0	0	0	0			0
Other current expend.			0	28	119	243			52
Rehab. of Infrastructure	SI-04(A)	160	64	2960	662	539		500	5403
Construction	Germany		64	547	0	0			998
Equipment and vehicles	UNDP		0	602	423	31			1099
Foreign salaries	EEC		0	137	124	139			250
Local salaries & allow.			0	0	0	0			0
Other current expend.			0	1674	115	369			3056
Training for Econ. Policy	PA-27(N)	0	0	0	431	371		0	0
Construction	UNDP				0	0			
Equipment and vehicles	EEC				3	2			
Foreign salaries					272	358			
Local salaries & allow.					49	0			
Other current expend.					107	11			
ASAC Investment Component	AG-90(7)	0	0	0	278	443		0	0
Construction	IDA				22	0			
Equipment and vehicles					148	110			
Foreign salaries					15	0			
Local salaries & allow.					0	2			
Other current expend.					93	331			
Ministry of Local Government		0	0	0	1327	1550		0	0
Rehab. of Primary Schools	SI-02	0	0	0	1327	1550		0	0
Construction	Japan				0	1550			
Equipment and vehicles					0	0			
Foreign salaries					0	0			
Local salaries & allow.					0	0			
Other current expend.					1327	0			
Ministry of Planning and Econ. Devt.									
PAPSCA - Primary Schools	SI-86								
Construction	IDA								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
TOTAL		2726	1291	9165	22492	33205			
Memorandum items:		2726	1291	9165	22492	33205	(Check)		
Total donor disbursements on:									
Primary education		2282	1067	5488	10575	20640			
Secondary education		0	0	0	0	0			
Teacher training		0	0	0	1805	5677			
Technical & commercial ed.		0	0	0	1915	1966			
Higher education		444	224	3677	8197	4922			
Other		0	0	0	0	0			

Note: The Government's data base on donor disbursement is in US$. In this table, these data have been converted to Uganda shillings with the average rates used by the IMF in monitoring Uganda's program: 320 sh/$ in 1989/90, and 548 sh/$ in 1990/91.

Table FE.6: CENTRAL GOVERNMENT EXPENDITURE IN THE EDUCATION SECTOR
(in USh millions)

	1989/90	--1990/91--		1991/92	1992/93
	Actual	Budget	Actual	Budget	Budget
Locally-controlled					
Expenditure	19,183	26,987	24,988	48,309	64,156
Primary education	5,721	9,227	6,983	20,079	30,261
Secondary education	3,157	4,515	4,037	5,127	7,525
Teacher training	2,675	3,021	2,969	3,725	5,013
Tech. & commercial ed.	1,740	2,080	1,682	2,558	3,528
Higher education	3,413	5,353	5,434	10,100	12,966
Other	2,477	2,791	3,883	6,719	4,863
Donor Disbursements	2,726	1,291	9,165	22,492	33,205
Primary education	2,282	1,067	5,488	10,575	20,640
Secondary education	0	0	0	0	0
Teacher training	0	0	0	1,805	5,677
Tech. & commercial ed.	0	0	0	1,915	1,966
Higher education	444	224	3,677	8,197	4,922
Other	0	0	0	0	0
Total Central Government					
Expenditure	21,909	28,278	34,153	70,801	97,361
Primary education	8,003	10,294	12,471	30,654	50,901
Secondary education	3,157	4,515	4,037	5,127	7,525
Teacher training	2,675	3,021	2,969	5,530	10,690
Tech. & commercial ed.	1,740	2,080	1,682	4,473	5,494
Higher education	3,857	5,577	9,111	18,297	17,888
Other	2,477	2,791	3,883	6,719	4,863

Source: Statistical Appendix Tables FE.4 and FE.5

Table FE.6a: CENTRAL GOVERNMENT EXPENDITURE IN THE EDUCATION SECTOR: PERCENT DISTRIBUTION

	1989/90	--1990/91--		1991/92	1992/93
	Actual	Budget	Actual	Budget	Budget
Locally-controlled					
Expenditure	100.0	100.0	100.0	100.0	100.0
Primary education	29.8	34.2	30.1	41.6	47.2
Secondary education	16.5	16.7	17.4	10.6	11.7
Teacher training	13.9	11.2	12.8	7.7	7.8
Tech. & commercial ed.	9.1	7.7	7.2	5.3	5.5
Higher education	17.8	19.8	23.4	20.9	20.2
Other	12.9	10.3	16.7	13.9	7.6
Donor Disbursements	100.0	100.0	100.0	100.0	100.0
Primary education	83.7	82.6	59.9	47.0	62.2
Secondary education	0.0	0.0	0.0	0.0	0.0
Teacher training	0.0	0.0	0.0	8.0	17.1
Tech. & commercial ed.	0.0	0.0	0.0	8.5	5.9
Higher education	16.3	17.4	40.1	36.4	14.8
Other	0.0	0.0	0.0	0.0	0.0
Total Central Government					
Expenditure	100.0	100.0	100.0	100.0	100.0
Primary education	39.7	36.4	38.5	43.3	52.3
Secondary education	15.7	16.0	12.5	7.2	7.7
Teacher training	13.3	10.7	9.2	7.8	11.0
Tech. & commercial ed.	8.6	7.4	5.2	6.3	5.6
Higher education	19.1	19.7	28.1	25.8	18.4
Other	12.3	9.9	12.0	9.5	5.0

Source: Based on Statistical Appendix Table FE.6

Table FH.1: RECURRENT EXPENDITURE IN THE HEALTH SECTOR, BY PROGRAM AND PRINCIPAL SUB-PROGRAMS (in USh millions)

02/18/93

Programs (and subprograms under the Director of Health Services)	This Report's Program Class.	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget
Ministry of Health		3953	8057	6159	12937		15551
Headquarters	6	644	2848	3696	5211		5228
Director of Health Services		1289	2784	1084	4505		7989
Management	6	145	313	122	507		899
Health Education	3	9	19	8	31		56
Maternal and Child Health	1	4	9	3	14		25
Nutrition Units (4)	1	8	17	7	28		50
Health Planning Unit	6	3	6	3	10		19
Medical Stores Management	6	29	63	24	101		180
Medical Store Supply	2S,2T	1015	2192	854	3547		6291
Medical Stores Inspectorate	6	5	11	4	17		31
Primary Health Care	2P	2	4	2	7		12
Immunizations (UNEPI)	1	1	2	1	3		6
Laboratory Services	2S,2T	3	6	3	10		19
Chemotherapeutics	2S,2T	7	15	6	24		43
Blood Transfusion Services	2S,2T	4	9	3	14		25
Epidemic Disease	3	7	15	6	24		43
Cancer Research	5	16	35	13	56		99
TB Control	3	4	9	3	14		25
Vector Control	3	4	9	3	14		25
Veterinary Public Health	3	5	11	4	17		31
Public Health Sanitary	3	3	6	3	10		19
Dental Division	2P	2	4	2	7		12
Nursing Division	6	6	13	5	21		37
Uganda Nurses Councils	6	2	4	2	7		12
Health Education	3	1	2	1	3		6
Environmental Health	3	4	9	3	14		25
Training (at 18 sites)	4	418	772	427	957		632
Regional & District Health Services	6	175	26	22	31		24
Hospitals (50 hospitals)	2S	1374	1510	892	2104		1557
Research Insititutions (4)	5	53	117	38	129		121
Mulago Hospital	2T	1472	2982	2250	3435		4855
Ministry of Local Govt.(Health Dept)	1	0	0	0	430		550
TOTAL		5425	11039	8439	16802		20956
Memorandum Items:		5425	11039	8439	16802		20956
Personal health services		3892	6751	4051	9625		13445
1. Preventive		13	28	11	475		631
2. Curative - Total		3879	6723	4040	9149		12814
Curative - Primary		4	9	3	14		25
Curative - Secondary		1889	2621	1325	3902		4746
Curative - Tertiary (Mulago)		1987	4093	2712	5233		8044
Curative - Unallocated		0	0	0	0		0
3. Community health interventions		37	80	31	129		229
4. Training		418	772	427	957		632
5. Research		69	152	51	185		220
6. Administration		1009	3284	3878	5906		6430

BEST COPY AVAILABLE

Table FH. 2: SECTION 1 CAPITAL EXPENDITURE IN THE HEALTH SECTOR, BY PROGRAM AND OBJECT OF EXPENDITURE
(In USh millions)

	This Report's Program Class.	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget
Ministry of Health		124	110	501	700		114
Headquarters	6	9	25	429	0		15
Construction		9	12	12			5
Equipment		0	13	417			10
Office of the Director of Medical Services	6	3	0	0	224		0
Construction		3			200		
Equipment		0			24		
Training Schools	4	1	24	30	22		47
Construction		1	24	30	0		27
Equipment		0	0	0	22		20
Hospitals	28	100	61	42	454		52
Construction		81	61	42	454		10
Equipment		19	0	0			42
Research Institutions	5	11	0	0	0		0
Construction		11					
Equipment		0					
Mulago Hospital		132	188	240	114		112
Headquarters	2T	104	148	195	2		2
Construction		102	146	192	0		0
Equipment		1	2	3	2		2
Medical Services	2T	21	30	30	32		64
Construction		0	0	0	0		4
Equipment		21	30	30	32		60
Public Health Care Programme	2P	0	0	0	32		0
Equipment					32		
Common Services		0	0	0	0		36
Equipment							36
Training Schools	4	7	10	15	48		0
Construction		0	0	0	20		
Equipment		7	10	15	28		
Ministry of Local Govt.-Health	1	0	0	0	287		50
Construction					212		0
Equipment					75		50
TOTAL		256	298	741	1101		276

Table FH. 3: LOCALLY-FINANCED SECTION 2 EXPENDITURE IN THE HEALTH SECTOR, BY PROGRAM AND ECONOMIC CLASSIFICATION OF EXPENDITURE (in USh millions)

Project	Code/ Donor	This Report's Program Class.	1989/90 Actual	-- 1990/91 -- Budget	-- 1990/91 -- Actual	-- 1991/92 -- Budget	-- 1991/92 -- Actual	1992/93 Budget
Ministry of Health			208	482	264	1430		8799
Constr. of Rakai Hospital	SI-96(N)	2S	0	0	0	11		198
Construction	IDA					11		123
Equipment and vehicles						0		0
Foreign salaries						0		0
Local salaries & allow.						0		0
Other current expend.						0		75
Strength. Health Ed.-I.E.C.	SI-76(B)	3	0	0		21		430
Construction	IDA				0	0		0
Equipment and vehicles						0		0
Foreign salaries						0		0
Local salaries & allow.						0		0
Other current expend.						21		430
Strength. Heal. Ed.-HEW	SI-76	3	5	3	0	137		871
Construction	UNICEF			0		0		0
Equipment and vehicles				3	0	0		190
Foreign salaries				0		0		0
Local salaries & allow.				0		0		0
Other current expend.				0		137		681
Mgt. Support-Med. Workshop	SI-75(D)	2S,2T	0	0	0	66		44
Construction	IDA					66		3
Equipment and vehicles						0		0
Foreign salaries						0		0
Local salaries & allow.						0		3
Other current expend.						0		38
Mgt. Support-P.I.U.(F.H.P.)	SI-75(C)	6	0	0	0	100		821
Construction	IDA					0		0
Equipment and vehicles						0		109
Foreign salaries						0		0
Local salaries & allow.						3		4
Other current expend.						97		708
Mgt. Support-Health Inf.	SI-75(A)	6	0	25	49	9		79
Construction	UNICEF			0		0		0
Equipment and vehicles				0		0		25
Foreign salaries				0		0		0
Local salaries & allow.				0		0		0
Other current expend.				25	49	9		54
Aids Control Programme Total			0	28	28	276		1203
Uganda AIDS Comm. Secr.	SI-49(E)	6	0	0	0	52		0
Construction	USAID					0		
Equipment and vehicles	UNDP					0		
Foreign salaries	UNICEF					0		
Local salaries & allow.	WHO					0		
Other current expend.						52		
AIDS Control-Blood Trans.	SI-49(D)	2S,2T	0	0	0	52		402
Construction	WHO					5		0
Equipment and vehicles						0		48
Foreign salaries						0		0
Local salaries & allow.						0		0
Other current expend.						47		354
AIDS Control-EPIC/SURV/RES	SI-49(C)	5	0	0	0	48		299
Construction	WHO					0		0
Equipment and vehicles						0		27
Foreign salaries						0		0
Local salaries & allow.						0		9
Other current expend.						48		263
AIDS Control Prog.-IEC	SI-49(B)	3	0	0	0	97		359
Construction	WHO					2		0
Equipment and vehicles						0		80

Foreign salaries						0	0
Local salaries & allow.						0	18
Other current expend.						95	261
AIDS Control Prog. Mgt.	SI-49(A)	6	0	0	0	27	143
Construction	WHO					0	0
Equipment and vehicles						0	47
Foreign salaries						0	0
Local salaries & allow.						0	25
Other current expend.						27	71
Health Education (ACP)	SI-NI	3	0	0	0	0	0
Construction	WHO						
Equipment and vehicles	UNICEF						
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Epidemology Research (ACP)	SI-NI	5	0	5	0	0	0
Construction	WHO			0			
Equipment and vehicles				0			
Foreign salaries				0			
Local salaries & allow.				5			
Other current expend.				0			
Laboratory Support (ACP)	SI-NI	2S,2T	0	23	28	0	0
Construction	WHO			0			
Equipment and vehicles				0			
Foreign salaries				0			
Local salaries & allow.				0			
Other current expend.				23	28		
Patient Care (ACP)	SI-NI	2S,2T	0	0	0	0	0
Construction	WHO						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Population Prog.-MCH/FP SE	SI-46(C)	1	0	0	0	12	787
Construction	UNAFPA					0	0
Equipment and vehicles						0	13
Foreign salaries						0	0
Local salaries & allow.						1	0
Other current expend.						11	774
Project Code: SI-31(B)	SI-31(B)	2P	0	0	0	223	176
Construction	UK					20	0
Equipment and vehicles	AUSTRALIA					114	88
Foreign salaries	SPAIN					0	0
Local salaries & allow.						0	0
Other current expend.						89	88
Drugs & Equipment Mgt.	SI-31(A)	2P	85	18	37	80	540
Construction	DENMARK			0		0	0
Equipment and vehicles				0		0	0
Foreign salaries				0		0	0
Local salaries & allow.				5	0	0	0
Other current expend.				13	37	80	540
Control/Prev. Disease-CDD	SI-30(B)	3	0	2	2	56	612
Construction	UNICEF			0		0	0
Equipment and vehicles				0		0	80
Foreign salaries				0		0	0
Local salaries & allow.				2	2	0	0
Other current expend.				0		56	532
Control/Prev. Disease-EPI	SI-30(A)	1	12	6	29	186	1003
Construction	UNICEF			0		0	0
Equipment and vehicles				0		0	98
Foreign salaries				0		0	0
Local salaries & allow.				6	29	0	0
Other current expend.				0		186	905
Heal. Manpower Train-O.C.OT	SI-29(B)	4	0	0	0	0	112
Construction	RCSB						0
Equipment and vehicles							12
Foreign salaries							0
Local salaries & allow.							0
Other current expend.							100

Health Training & Planning	SI-29(A)	4	0	0	0	15	145
Construction	CANADA					0	67
Equipment and vehicles						0	17
Foreign salaries						0	0
Local salaries & allow.						0	13
Other current expend.						15	48
Strength. of PHC-Sanitation	SI-28(C)	2P	0	0	0	12	74
Construction	UNICEF					0	0
Equipment and vehicles						0	0
Foreign salaries						0	0
Local salaries & allow.						0	9
Other current expend.						12	74
Strength. PHC Serv.-CBHCA	SI-28(B)	2P	0	0	0	1	692
Construction	UNICEF					0	0
Equipment and vehicles						0	0
Foreign salaries	--					0	0
Local salaries & allow.						0	0
Other current expend.						1	692
Strength. PHC-Family H/I	SI-28(A)	2P	0	0	0	49	806
Construction	USAID					0	806
Equipment and vehicles						0	0
Foreign salaries						0	0
Local salaries & allow.						0	0
Other current expend.						49	0
Rehab. of Rural Hosp.-Mbale	SI-06(B)	2S	34	24	36	8	186
Construction	ADB			0		0	170
Equipment and vehicles				3	15	0	0
Foreign salaries				0		0	0
Local salaries & allow.				0		0	0
Other current expend.				21	21	8	16
Rehab. of Rural Hosp -FHP	SI-06( )	2S	50	0	0	168	0
Construction	IDA					161	
Equipment and vehicles						0	
Foreign salaries						0	
Local salaries & allow.						0	
Other current expend.						7	
Proj. Preparation Facility	SI-NI	6	22	0	0	0	0
Construction	IDA						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Sexually Trans. Disease	SI-NI	3	0	0	0	0	0
Construction	WHO						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Transfusion Service	SI-74	2S,2T	0	0	0	0	0
Construction	EEC						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
1st Health Project	SI-782S,2P,3,6		0	31	83	0	0
Construction	IDA			4	0		
Equipment and vehicles	AUSTRIA			0			
Foreign salaries				0			
Local salaries & allow.				0			
Other current expend.				27	83		
Health Information System	SI-79	6	0	0	0	0	0
Construction	UNICEF						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Opthalmic Clinical Offices	SI-29	2P	0	0	0	0	0
Construction	RCSB						

BEST COPY AVAILABLE

Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Mental Child Health	SI-29	2P	0	0	0	0	0
Construction	RCSB						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Mental Child Health	SI-80	2P	0	0	0	0	0
Construction	UNFPA						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
National AIDS Train./Inf.	SI-81	4	0	2	0	0	0
Construction	UNDP						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Medical Equipment	NP	2S,2P	0	343	0	0	0
Construction	SPAIN						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Mulago Hospital			100	375	200	976	2705
==========			===	===	===	===	====
Rehab. of Mulago Hospital	SI-05( )	2T	43	163	180	876	560
Construction	FRANCE			0		0	0
Equipment and vehicles	IDA			0		0	0
Foreign salaries	SCF			13		0	0
Local salaries & allow.				0		0	0
Other current expend.				150		876	560
Institution/Staff Quarters	SI-08(N)	2T	0	0	0	0	200
Construction	IDA						100
Equipment and vehicles							0
Foreign salaries							0
Local salaries & allow.							0
Other current expend.							100
Health Services Rehab.	SI-75(N)	2T	0	0	20	100	1945
Construction	NIGERIA					100	981
Equipment and vehicles	ADB					0	259
Foreign salaries	OPEC					0	0
Local salaries & allow.						0	0
Other current expend.						0	705
Mulago Complex Infrastruc.	SI-95(N)	2T	0	0	0	0	0
Construction	IDA						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Steam Rehabilitation	SI-05	2T	3	12	0	0	0
Construction	ODA			0			
Equipment and vehicles				0			
Foreign salaries				0			
Local salaries & allow.				0			
Other current expend.				12			
Pre-investment Study	SI-05	2T	0	0	0	0	0
Construction	ADB						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Global Rehab. of Mulago	SI-05	2T	0	0	0	0	0
Construction	ADB						
Equipment and vehicles							

Foreign salaries							
Local salaries & allow.							
Other current expend.							
Mgt. Strengthening-SCF	SI-05	2T	0	0	0	0	0
Construction	CDA						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Medical Equipment	SI-05	2T	53	200	0	0	0
Construction	SPAIN						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
1st Health Project	SI-78	2T	0	0	0	0	0
Construction	IDA						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Ministry of Local Government			220	189	150	1189	1029
Drugs/Equipment Management	SI-31(C)	2P	111	95	89	708	424
Construction	DENMARK			0		0	0
Equipment and vehicles				0		0	0
Foreign salaries				0		0	0
Local salaries & allow.				0		0	0
Other current expend.				95		708	424
Control/Prev. Disease-CDD	SI-30(D)	1,3	0	0	7	57	120
Construction	UNICEF					0	0
Equipment and vehicles						0	0
Foreign salaries						0	0
Local salaries & allow.						0	0
Other current expend.						57	120
Control/Prev. Disease-UNEPI	SI-30(C)	1,3	85	73	34	269	408
Construction	UNICEF			0		0	0
Equipment and vehicles				52		37	121
Foreign salaries				0		0	0
Local salaries & allow.				0		0	0
Other current expend.				21		232	287
Strength. of PHC-Sanitation	SI-28(D)	2P	5	4	9	68	77
Construction	UNICEF			0		0	0
Equipment and vehicles				0		0	19
Foreign salaries				0		0	0
Local salaries & allow.				4		46	0
Other current expend.				0		22	58
REH Centers for Disabled	SI-20( )	2P	7	6	11	87	0
Construction	UK					32	
Equipment and vehicles	NORWAY					55	
Foreign salaries						0	
Local salaries & allow.						0	
Other current expend.						0	
Rehab. of Health Centers	SI-07	2P	0	0	0	0	0
Construction	EDF						
Equipment and vehicles							
Foreign salaries							
Local salaries & allow.							
Other current expend.							
Primary Health Care	SI-07	2P	13	11	0	0	0
Construction	DANIDA			0			
Equipment and vehicles				0			
Foreign salaries				0			
Local salaries & allow.				0			
Other current expend.				11			
TOTAL			528	1046	614	3595	12533

BEST COPY AVAILABLE

Memorandum items:		528	1046	614	3595	12533
Personal health services		459	959	506	2870	8378
1. Preventive	1	54	43	50	361	2054
2. Curative - Total		404	916	456	2509	6324
Curative - Primary	2P	220	311	160	1228	2789
Curative - Secondary	2S	84	219	82	246	607
Curative - Tertiary (Hu	2T	100	387	214	1035	2928
Curative - Unallocated	2	0	0	0	0	0
3. Community health interventio	3	47	52	50	474	2556
4. Training	4	0	2	0	15	257
5. Research	5	0	5	0	48	299
6. Administration	6	22	28	58	188	1043
Unclassified						

Table FH.4: LOCALLY-CONTROLLED CENTRAL GOVERNMENT EXPENDITURE
IN THE HEALTH SECTOR, BY THIS REPORT'S CLASSIFICATION
(in USh millions)

	1989/90	-- 1990/91 --		-- 1991/92 --		1992/93
	Actual	Budget	Actual	Budget	Actual	Budget
Personal Health Services	4575	7949	4824	13227		21941
Recurrent	3892	6751	4051	9625		13445
Section 1	225	239	267	732		118
Section 2 - Local Cont.	459	959	506	2870		8378
Preventive	67	71	60	836		2685
Recurrent	13	28	11	475		631
Section 1	0	0	0	0		0
Section 2 - Local Cont.	54	43	50	361		2054
Curative - Total	4508	7878	4764	12390		19256
Recurrent	3879	6723	4040	9149		12814
Section 1	225	239	267	732		118
Section 2 - Local Cont.	404	916	456	2509		6324
Curative - Primary	224	319	163	1486		2814
Recurrent	4	9	3	14		25
Section 1	0	0	0	244		0
Section 2 - Local Cont.	220	311	160	1228		2789
Curative - Secondary	2073	2901	1449	4602		5405
Recurrent	1889	2621	1325	3902		4746
Section 1	100	61	42	454		52
Section 2 - Local Cont.	84	219	82	246		607
Curative - Tertiary	2211	4658	3151	6302		11038
Recurrent	1987	4093	2712	5233		8044
Section 1	125	178	225	34		66
Section 2 - Local Cont.	100	387	214	1035		2928
Curative - Unallocated	0	0	0	0		0
Recurrent	0	0	0	0		0
Section 1						
Section 2 - Local Cont.	0	0	0	0		0
Community health interventions	84	132	81	678		2835
Recurrent	37	80	31	129		229
Section 1	0	0	0	75		50
Section 2 - Local Cont.	47	52	50	474		2556
Training	426	808	472	1042		936
Recurrent	418	772	427	957		632
Section 1	8	34	45	70		47
Section 2 - Local Cont.	0	2	0	15		257
Research	80	157	51	233		519
Recurrent	69	152	51	185		220
Section 1	11	0	0	0		0
Section 2 - Local Cont.	0	5	0	48		299
Administration	1043	3338	4365	6318		7488
Recurrent	1009	3284	3878	5906		6430
Section 1	12	25	429	224		15
Section 2 - Local Cont.	22	28	58	188		1043
Unclassified	0	0	0	0		0
Section 1						
Section 2 - Local Cont.	0	0	0	0		0

Total	6209	12383	9794	21498	33765
Recurrent	5425	11039	8439	16802	20956
Section 1	256	298	741	1101	276
Section 2 - Local Cont.	528	1046	614	3595	12533

Table FH.5: DONOR-FINANCED SECTION 2 EXPENDITURE
IN THE HEALTH SECTOR,
BY PROGRAM AND ECONOMIC CLASSIFICATION OF EXPENDITURE
(in USh millions)

(US$ thousands)

Project	Code/ Donor	This Report's Program Class.	1989/90 Actual	-- 1990/91 -- Budget	Actual	-- 1991/92 -- Budget	Actual	1992/93 Budget	1989/90 $Actual	1990/ $Actu
Ministry of Health			8911	5451	19283	22186		19778	27881	3520
Constr. of Rakai Hospital	SI-96(N)	2S	0	0	0	160		2547		
Construction	IDA					160		1651		
Equipment and vehicles						0		0		
Foreign salaries						0		0		
Local salaries & allow.						0		0		
Other current expend.						0		896		
Strength. Health Ed.-I.E.C.	SI-76(B)	3	0	0	0	329		60		
Construction	IDA					0		0		
Equipment and vehicles						0		0		
Foreign salaries						0		0		
Local salaries & allow.						0		0		
Other current expend.						329		60		
Strength. Heal. Ed.-HEN	SI-76( )	3	419	315	0	749		918	1311	
Construction	UNICEF			0		0		0		
Equipment and vehicles				20		172		221		
Foreign salaries				0		151		149		
Local salaries & allow.				0		0		0		
Other current expend.				295		426		548		
Mgt. Support-Med. Workshop	SI-75(D)	2S,2T	0	0	0	960		1430		
Construction	IDA					560		834		
Equipment and vehicles						400		596		
Foreign salaries						0		0		
Local salaries & allow.						0		0		
Other current expend.						0		0		
Mgt. Support-P.I.U.(F.H.P.)	SI-75(C)	6	0	0	0	369		0		
Construction	IDA					0				
Equipment and vehicles						0				
Foreign salaries						0				
Local salaries & allow.						0				
Other current expend.						369				
Mgt. Support-Health Inf.	SI-75(A)	6	0	61	0	80		79		
Construction	UNICEF			0		0		0		
Equipment and vehicles				12		0		2		
Foreign salaries				24		0		0		
Local salaries & allow.				2		0		0		
Other current expend.				23		80		77		
Aids Control Programme Total			699	885	889	848		390	2186	162
Uganda AIDS Comm. Secr.	SI-49(E)	6	0	0	773	738		0		
Construction	USAID					3				
Equipment and vehicles	UNDP					241				
Foreign salaries	UNICEF					0				
Local salaries & allow.	WHO					182				
Other current expend.						312				
AIDS Control-Blood Trans.	SI-49(D)	2S,2T	0	0	13	12		95		
Construction	WHO					0		0		
Equipment and vehicles						0		0		
Foreign salaries						0		95		
Local salaries & allow.						0		0		
Other current expend.						12		0		
AIDS Control-EPIC/SURV/RES	SI-49(C)	5	0	0	19	18		95		
Construction	WHO					0		0		
Equipment and vehicles						2		0		
Foreign salaries						0		95		
Local salaries & allow.						0		0		
Other current expend.						16		0		
AIDS Control Prog.-IEC	SI-49(B)	3	0	0	67	64		105		
Construction	WHO					0		0		

BEST COPY AVAILABLE

Equipment and vehicles						0	0		
Foreign salaries						0	95		
Local salaries & allow.						0	0		
Other current expend.						64	10		
AIDS Control Prog. Mgt.	SI-49(A)	6	77	98	17	16	95		
Construction	WHO			1		0	0		
Equipment and vehicles				29		0	0		
Foreign salaries				12		0	0		
Local salaries & allow.				13		0	95		
Other current expend.				43		16	0		
Health Education (ACP)	SI-NI	3	219	277	0	0	0		
Construction	WHO			0					
Equipment and vehicles	UNICEF			20					
Foreign salaries				38					
Local salaries & allow.				23					
Other current expend.				196					
Epidemology Research (ACP)	SI-NI	5	36	46	0	0	0		
Construction	WHO			0					
Equipment and vehicles				12					
Foreign salaries				12					
Local salaries & allow.				0					
Other current expend.				22					
Laboratory Support (ACP)	SI-NI	2S,2T	213	270	0	0	0		
Construction	WHO			26					
Equipment and vehicles				15					
Foreign salaries				9					
Local salaries & allow.				0					
Other current expend.				220					
Patient Care (ACP)	SI-NI	2S,2T	153	194	0	0	0		
Construction	WHO			10					
Equipment and vehicles				12					
Foreign salaries				8					
Local salaries & allow.				22					
Other current expend.				142					
Population Prog.-MCH/FP SE	SI-46(C)	1	179	0	124	566	572	561	22
Construction	UNAFPA					0	0		
Equipment and vehicles						57	110		
Foreign salaries						163	253		
Local salaries & allow.						0	0		
Other current expend.						346	209		
Project Code: SI-31(B)	SI-31(B)	2P	0	0	0	3404	2622		
Construction	UK					0	0		
Equipment and vehicles	AUSTRALIA					3404	2026		
Foreign salaries	SPAIN					0	0		
Local salaries & allow.						0	0		
Other current expend.						0	596		
Drugs & Equipment Mgt.	SI-31(A)	2P	1903	579	3092	5746	4917	5953	564
Construction	DENMARK			0		0	0		
Equipment and vehicles				27		0	0		
Foreign salaries				10		0	0		
Local salaries & allow.				0		0	0		
Other current expend.				542		5746	4917		
Control/Prev. Disease-CDD	SI-30(B)	3	3	167	11	484	328	9	2
Construction	UNICEF			0		0	0		
Equipment and vehicles				0		0	0		
Foreign salaries				8		107	48		
Local salaries & allow.				0		0	0		
Other current expend.				159		577	280		
Control/Prev. Disease-EPI	SI-30(A)	1	1042	766	1879	2554	3412	3260	343
Construction	UNICEF			100		0	0		
Equipment and vehicles				80		1043	1191		
Foreign salaries				46		320	262		
Local salaries & allow.				10		0	0		
Other current expend.				530		1191	1959		
Heal. Manpower Train-O.C.OT	SI-29(B)	4	0	124	0	71	0		
Construction	RCSB			80		0			
Equipment and vehicles				3		16			
Foreign salaries				0		16			
Local salaries & allow.				5		0			

Other current expend.				36		39			
Health Training & Planning	SI-29(A)	4	65	93	602	215	91	204	109
Construction	CANADA			1		0	0		
Equipment and vehicles				12		84	0		
Foreign salaries				15		8	0		
Local salaries & allow.				4		0	0		
Other current expend.				61		123	91		
Strength. of PHC-Sanitation	SI-28(C)	2P	177	0	1472	116	58	555	268
Construction	UNICEF					0	3		
Equipment and vehicles						61	55		
Foreign salaries						0	0		
Local salaries & allow.						0	0		
Other current expend.						55	0		
Strength. PHC Serv.-CBHCA	SI-28(B)	2P	1461	0	2739	127	141	4570	500
Construction	UNICEF					0	0		
Equipment and vehicles						0	27		
Foreign salaries						82	114		
Local salaries & allow.						0	0		
Other current expend.						45	0		
Strength. PHC-Family H/I	SI-28(A)	2P	299	0	0	248	0	937	
Construction	USAID					0			
Equipment and vehicles						0			
Foreign salaries						0			
Local salaries & allow.						0			
Other current expend.						248			
Rehab. of Rural Hosp.-Mbale	SI-06(B)	2S	110	255	1537	1120	0	345	280
Construction	ADB			0		397			
Equipment and vehicles				212		723			
Foreign salaries				34		0			
Local salaries & allow.				0		0			
Other current expend.				9		0			
Rehab. of Rural Hosp -FHP	SI-06( )	2S	0	0	0	3840	2213		
Construction	IDA					3730	2026		
Equipment and vehicles						0	0		
Foreign salaries						0	0		
Local salaries & allow.						0	0		
Other current expend.						110	187		
Proj. Preparation Facility	SI-NI	6	0	0	0	0	0		
Construction	IDA								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
Sexually Trans. Disease	SI-NI	3	0	87	0	0	0		
Construction	WHO			7					
Equipment and vehicles				18					
Foreign salaries				12					
Local salaries & allow.				8					
Other current expend.				42					
Transfusion Service	SI-74	2S,2T	0	98	0	0	0		
Construction	EEC			32					
Equipment and vehicles				16					
Foreign salaries				0					
Local salaries & allow.				13					
Other current expend.				37					
1st Health Project	SI-782S,2P,3,6		2554	816	6938	0	0	7990	1266
Construction	IDA			477					
Equipment and vehicles	AUSTRIA			0					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				339					
Health Information System	SI-79	6	0	29	0	0	0		
Construction	UNICEF			0					
Equipment and vehicles				11					
Foreign salaries				0					
Local salaries & allow.				4					
Other current expend.				14					
Opthalmic Clinical Offices	SI-29	2P	0	124	0	0	0		

Construction	RCSB			80					
Equipment and vehicles				3					
Foreign salaries				1					
Local salaries & allow.				4					
Other current expend.				36					
Mental Child Health	SI-29	2P	0	0	0	0	0		
Construction	RCSB								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
Mental Child Health	SI-80	2P	0	68	0	0	0		
Construction	UNFPA			26					
Equipment and vehicles				0					
Foreign salaries				0					
Local salaries & allow.				13					
Other current expend.				29					
National AIDS Train./Inf.	SI-81	4	0	34	0	0	0		
Construction	UNDP			0					
Equipment and vehicles				0					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				34					
Medical Equipment	NP	2S,2P	0	950	0	0	0		
Construction	SPAIN			0					
Equipment and vehicles				950					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				0					
Mulago Hospital			680	1748	806	3564	5729	2129	14?
Rehab. of Mulago Hospital	SI-05( )	2T	128	93	274	2101	592	400	5?
Construction	FRANCE			0		0	0		
Equipment and vehicles	IDA			93		1425	354		
Foreign salaries	SCF			0		276	0		
Local salaries & allow.				0		0	0		
Other current expend.				0		400	238		
Institution/Staff Quarters	SI-08(N)	2T	0	0	0	246	119		
Construction	IDA					55	0		
Equipment and vehicles						55	0		
Foreign salaries						0	0		
Local salaries & allow.						0	0		
Other current expend.						136	119		
Health Services Rehab.	SI-75(N)	2T	0	0	0	651	5018		
Construction	NIGERIA					280	2117		
Equipment and vehicles	ADB					0	1265		
Foreign salaries	OPEC					0	0		
Local salaries & allow.						0	0		
Other current expend.						371	3636		
Mulago Complex Infrastruc.	SI-95(N)	2T	0	0	0	566	0		
Construction	IDA					215			
Equipment and vehicles						0			
Foreign salaries						0			
Local salaries & allow.						0			
Other current expend.						351			
Steam Rehabilitation	SI-05	2T	514	41	359	0	0	1607	65
Construction	CDA			0					
Equipment and vehicles				41					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				0					
Pre-investment Study	SI-05	2T	39	19	174	0	0	122	31
Construction	ADB			0					
Equipment and vehicles				0					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				19					
Global Rehab. of Mulago	SI-05	2T	0	462	0	0	0		
Construction	ADB								

BEST COPY AVAILABLE

Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
Mgt. Strengthening-SCF	SI-05	2T	0	136	0	0	0		
Construction	ODA			0					
Equipment and vehicles				0					
Foreign salaries				36					
Local salaries & allow.				0					
Other current expend.				100					
Medical Equipment	SI-05	2T	0	712	0	0	0		
Construction	SPAIN								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
1st Health Project	SI-78	2T	0	285	0	0	0		
Construction	IDA								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
Ministry of Local Government			530	1480	820	606	0	1659	149
Drugs/Equipment Management	SI-31(C)	2P	0	421	0	0	0		
Construction	DENMARK			0					
Equipment and vehicles				0					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				421					
Control/Prev. Disease-CDD	SI-30(D)	1,3	0	686	0	0	0		
Construction	UNICEF			0					
Equipment and vehicles				200					
Foreign salaries				0					
Local salaries & allow.				1					
Other current expend.				485					
Control/Prev. Disease-UNEPI	SI-30(C)	1,3	0	0	0	0	0		
Construction	UNICEF								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
Strength. of PHC-Sanitation	SI-28(D)	2P	0	106	0	0	0		
Construction	UNICEF			0					
Equipment and vehicles				106					
Foreign salaries				0					
Local salaries & allow.				0					
Other current expend.				0					
REH Centers for Disabled	SI-20( )	2P	0	0	0	606	0		
Construction	UK					58			
Equipment and vehicles	NORWAY					88			
Foreign salaries						315			
Local salaries & allow.						0			
Other current expend.						145			
Rehab. of Health Centers	SI-07	2P	378	267	162	0	0	1183	29
Construction	EDF			0					
Equipment and vehicles				68					
Foreign salaries				0					
Local salaries & allow.				72					
Other current expend.				127					
Primary Health Care	SI-07	2P	152	0	657	0	0	476	120
Construction	DANIDA								
Equipment and vehicles									
Foreign salaries									
Local salaries & allow.									
Other current expend.									
TOTAL - PROJECTS IN BUDGET DOCUMENT			10121	8679	20908	26356	25507	31669	3816

PROJECTS OUTSIDE BUDGET DOCUMENT		2092	0	5711	0	0	6545	1042
GRAND TOTAL		12213	8679	26620	26356	25507	38214	4859
Memorandum items:		12213	8679	26620	26356	25507		
Personal health services		9879	6646	20320	23023	23736		
1. Preventive	1	1329	1109	2091	3120	3984		
2. Curative - Total		8550	5537	18229	19903	19752		
Curative - Primary	2P	5605	2179	11807	10247	7738		
Curative - Secondary	2S	1996	1329	5450	5606	5523		
Curative - Tertiary	2T	949	2029	972	4050	6492		
Curative - Unallocated	2	0	0	0	0	0		
3. Community health interventio	3	1811	1458	3878	1826	1411		
4. Training	4	88	251	691	286	91		
5. Research	5	38	46	27	18	95		
6. Administration	6	398	278	1705	1203	174		
Unclassified								

TABLE FH5a: LIST OF PROJECTS OUTSIDE BUDGET DOCUMENT

Project	Donor	1989/90 Actual	1990/91 Actual	Program
Kitgum health rehab.	Italy	1100	510	29
KCC clinic	SCF	31	31	29
W. Nile PHC	SCF	182	0	29
Mukono health services	Denmark	492	2546	29
Hoima health rehab.	Italy	200	340	29
Basic health services	Germany	0	296	29
Moroto health rehab.	Italy	500	850	29
Hoima hospital	Italy	800	0	28
Medical Co-op.	Korea Rep	96	0	28
Improvement Lacor hospital	Italy	1200	1800	28
Rehab. of Mpigi hospital	Finland	115	391	28
3 experts in Mulago	SCF	267	291	27
Nutrition	WHO	20	45	1
4 advisers UNEPI	SCF	654	278	1
Tuberculosis	WHO	18	41	3
Zoonoses	WHO	27	60	3
Blindness & Deafness	WHO	10	23	3
Disease vector control	WHO	47	106	3
Community health proj.	Canada	123	1668	3
TB & leprosy control	Italy	400	680	3
Schistosomiasis	IDRC	62	17	3
Devt. human res. for health	WHO	72	162	4
Health sit.\trend analysis	WHO	6	14	5
Mgt. Proc. Nat. Health Devt	WHO	98	221	6
General prog. development	WHO	25	56	6
TOTAL		6545	10426	

Table FH. 6: CENTRAL GOVERNMENT EXPENDITURE IN THE HEALTH SECTOR
(in Ush millions)

	1989/90	- 1990/91 -		-- 1991/92 --		1992/93
	Actual	Budget	Actual	Budget	Actual	Budget
Locally-financed Expenditure	6209	12383	9794	21498		33719
Personal health services	4575	7949	4824	13227		21941
1. Preventive	67	71	60	836		2685
2. Curative - Total	4508	7878	4764	12390		19256
Curative - Primary	224	319	163	1486		2814
Curative - Secondary	2073	2901	1449	4602		5405
Curative - Tertiary	2211	4658	3151	6302		11038
Curative - Unallocated	0	0	0	0		0
3. Community health interventions	84	132	81	678		2835
4. Training	426	808	472	1042		936
5. Research	80	157	51	233		519
6. Administration	1043	3338	4365	6318		7488
Other	0	0	0	0		0
Donor Disbursements	12213	8679	26620	26356		25507
Personal health services	9879	6646	20320	23023		23736
1. Preventive	1329	1109	2091	3120		3984
2. Curative - Total	8550	5537	18229	19903		19752
Curative - Primary	5605	2179	11807	10247		7738
Curative - Secondary	1996	1329	5450	5606		5523
Curative - Tertiary	949	2029	972	4050		6492
Curative - Unallocated	0	0	0	0		0
3. Community health interventions	1811	1458	3878	1826		1411
4. Training	88	251	691	286		91
5. Research	38	46	27	18		95
6. Administration	398	278	1705	1203		174
Other	0	0	0	0		0
Total Central Government Expenditure	18422	21062	36413	47854		59226
Personal health services	14454	14595	25144	36250		45677
1. Preventive	1396	1180	2152	3956		6669
2. Curative - Total	13057	13415	22992	32293		39008
Curative - Primary	5829	2498	11970	11733		10552
Curative - Secondary	4068	4231	6899	10208		10927
Curative - Tertiary	3160	6687	4123	10352		17529
Curative - Unallocated	0	0	0	0		0
3. Community health interventions	1895	1390	3959	2504		4246
4. Training	514	1059	1163	1328		1027
5. Research	118	203	78	251		614
6. Administration	1441	3616	6070	7521		7662
Other	0	0	0	0		0

Source: Statistical Appendix Tables FH.4 and FH.5

TABLE E.1

PRIMARY SCHOOL ENROLLMENTS , ENROLLMENT RATIOS , BY GENDER AND DISTRICT . 1990

DISTRICT	BOYS			GIRLS			TOTAL		
	6-12 years	Enrollment	Ratio	6-12 years	Enrollment	Ratio	6-12 years	Enrollment	Ratio
KAMPALA	78,208	30,797	39.38%	77,786	33,930	43.62%	155,994	64,727	41.49%
Kampala	78,208	30,797	39.38%	77,786	33,930	43.62%	155,994	64,727	41.49%
CENTRAL	400,045	244,615	61.15%	397,884	250,183	62.88%	797,929	494,798	62.01%
Kalangala	1,281	701	54.72%	1,274	672	52.75%	2,555	1,373	53.74%
Luwero	44,583	34,034	76.34%	44,342	33,029	74.49%	88,925	67,063	75.42%
Masaka	82,780	31,986	38.64%	82,333	34,278	41.63%	165,113	66,264	40.13%
Mpigi	90,664	57,106	62.99%	90,175	62,944	69.80%	180,839	120,050	66.39%
Mubende	62,144	40,969	65.93%	61,808	39,820	64.43%	123,952	80,789	65.18%
Mukono	80,396	56,525	70.31%	79,961	55,718	69.68%	160,357	112,243	70.00%
Rakai	38,197	23,294	60.98%	37,991	23,722	62.44%	76,188	47,016	61.71%
EASTERN	413,725	361,948	87.49%	411,492	286,372	69.59%	825,217	648,320	78.56%
Iganga	95,395	42,274	44.31%	94,880	37,500	39.52%	190,275	79,774	41.93%
Jinja	28,461	22,574	79.32%	28,307	22,111	78.11%	56,768	44,685	78.72%
Kamuli	48,387	27,210	56.23%	48,126	22,643	47.05%	96,513	49,853	51.65%
Kapchorwa	11,491	11,561	100.61%	11,429	9,135	79.93%	22,920	20,696	90.30%
Kumi	24,538	34,558	140.83%	24,406	23,288	95.42%	48,944	57,846	118.19%
Mbale	69,772	78,665	112.75%	69,395	70,494	101.58%	139,167	149,159	107.18%
Soroti	43,874	66,261	151.03%	43,637	40,986	93.92%	87,511	107,247	122.55%
Tororo	91,807	78,845	85.88%	91,312	60,215	65.94%	183,119	139,060	75.94%
NORTHERN	318,607	344,284	108.06%	316,886	198,451	62.63%	635,493	542,735	85.40%
Apac	46,258	50,638	109.47%	46,009	32,424	70.47%	92,267	83,062	90.02%
Arua	63,899	81,038	126.82%	63,553	43,420	68.32%	127,452	124,458	97.65%
Gulu	33,960	41,768	122.99%	33,776	25,451	75.35%	67,736	67,219	99.24%
Kitgum	35,872	49,254	137.30%	35,678	25,403	71.20%	71,550	74,657	104.34%
Kotido	19,808	11,435	57.73%	19,701	5,978	30.34%	39,509	17,413	44.07%
Lira	49,885	55,297	110.85%	49,616	32,543	65.59%	99,501	87,840	88.28%
Moroto	18,389	5,364	29.17%	18,290	3,577	19.56%	36,679	8,941	24.38%
Moyo	18,153	17,273	95.15%	18,055	10,473	58.01%	36,208	27,746	76.63%
Nebbi	32,383	32,217	99.49%	32,208	19,182	59.56%	64,591	51,399	79.58%
WESTERN	456,415	335,077	73.41%	453,952	281,257	61.96%	910,367	616,334	67.70%
Bundibugyo	11,530	8,152	70.70%	11,468	5,674	49.48%	22,998	13,826	60.12%
Bushenyi	75,113	59,434	79.13%	74,708	51,531	68.98%	149,821	110,965	74.07%
Hoima	39,005	42,896	109.98%	38,794	38,300	98.73%	77,799	81,196	104.37%
Kabale	64,628	47,460	73.44%	64,279	35,902	55.85%	128,907	83,362	64.67%
Kabarole	73,813	52,844	71.59%	73,414	44,486	60.60%	147,227	97,330	66.11%
Kasese	34,787	23,810	68.45%	34,600	18,612	53.79%	69,387	42,422	61.14%
Masindi	24,676	23,217	94.09%	24,543	19,030	77.54%	49,219	42,247	85.83%
Mbarara	93,010	47,282	50.84%	92,508	40,547	43.83%	185,518	87,829	47.34%
Rukungiri	39,853	29,982	75.23%	39,638	27,175	68.56%	79,491	57,157	71.90%
TOTAL	1,667,000	1,316,721	78.99%	1,658,000	1,050,193	63.34%	3,325,000	2,366,914	71.19%

Source : Population figures - Mission estimates based on 1991 population census
Enrollment figures - MOE 1990 school census

TABLE E.1.a

PRIMARY SCHOOL ENROLLMENTS , ENROLLMENT RATIOS BY DISTRICT.1989 & 1990

DISTRICT	Enrollment		6-12 years		GER	GER
	1989	1990	1989	1990	1989	1990
KAMPALA	72,604	64,727	149,754	155,994	48.48%	41.49%
Kampala	72,604	64,727	149,754	155,994	48.48%	41.49%
CENTRAL	532,205	494,798	766,012	797,929	69.48%	62.01%
Kalangala	3,388	1,373	2,453	2,555	138.13%	53.74%
Luwero	65,430	67,063	85,368	88,925	76.64%	75.42%
Masaka	70,710	66,264	158,508	165,113	44.61%	40.13%
Mpigi	141,594	120,050	173,605	180,839	81.56%	66.39%
Mubende	86,819	80,789	118,994	123,952	72.96%	65.18%
Mukono	99,799	112,243	153,943	160,357	64.83%	70.00%
Rakai	64,465	47,016	73,140	76,188	88.14%	61.71%
EASTERN	611,788	648,320	792,208	825,217	77.23%	78.56%
Iganga	75,488	79,774	182,664	190,275	41.33%	41.93%
Jinja	39,058	44,685	54,497	56,768	71.67%	78.72%
Kamuli	50,613	49,853	92,652	96,513	54.63%	51.65%
Kapchorwa	19,414	20,696	22,003	22,920	88.23%	90.30%
Kumi	53,034	57,846	46,986	48,944	112.87%	118.19%
Mbale	110,710	149,159	133,600	139,167	82.87%	107.18%
Soroti	107,076	107,247	84,011	87,511	127.46%	122.55%
Tororo	156,395	139,060	175,794	183,119	88.96%	75.94%
NORTHERN	437,958	542,735	610,073	635,493	71.79%	85.40%
Apac	64,113	83,062	88,576	92,267	72.38%	90.02%
Arua	83,909	124,458	122,354	127,452	68.58%	97.65%
Gulu	34,496	67,219	65,027	67,736	53.05%	99.24%
Kitgum	70,268	74,657	68,688	71,550	102.30%	104.34%
Kotido	17,333	17,413	37,929	39,509	45.70%	44.07%
Lira	87,841	87,840	95,521	99,501	91.96%	88.28%
Moroto	9,799	8,941	35,212	36,679	27.83%	24.38%
Moyo	20,129	27,746	34,760	36,208	57.91%	76.63%
Nebbi	50,070	51,399	62,007	64,591	80.75%	79.58%
WESTERN	649,604	616,334	873,952	910,367	74.33%	67.70%
Bundibugyo	11,547	13,826	22,078	22,998	52.30%	60.12%
Bushenyi	112,515	110,965	143,828	149,821	78.26%	74.07%
Hoima	120,482	81,196	74,687	77,799	161.32%	104.37%
Kabale	74,191	83,362	123,751	128,907	59.95%	64.67%
Kabarole	89,946	97,330	141,338	147,227	63.64%	66.11%
Kasese	24,552	42,422	66,612	69,387	36.86%	61.14%
Masindi	34,598	42,247	47,250	49,219	73.22%	85.83%
Mbarara	118,340	87,829	178,097	185,518	66.45%	47.34%
Rukungiri	63,395	57,157	76,311	79,491	83.07%	71.90%
TOTAL	2,304,159	2,366,914	3,192,000	3,325,000	72.19%	71.19%

Enrollment data from 1989 and 1990 school censuses. Age-group data are mission esti-ates based on life tables used in demographic projections.

TABLE E.2 PRIMARY SCHOOL ENROLLMENTS BY GRADE, GENDER AND DISTRICT . 1990

DISTRICT	BOYS								GIRLS								GRAND TOTAL
	P1	P2	P3	P4	P5	P6	P7	TOTAL	P1	P2	P3	P4	P5	P6	P7	TOTAL	
1 Apac	10,212	8,354	7,998	6,471	6,074	5,934	5,595	50,638	8,819	6,324	5,577	3,757	3,214	2,935	1,798	32,424	83,062
2 Arua	23,129	13,421	12,036	9,752	8,250	7,118	7,332	81,038	15,763	7,899	6,595	4,809	3,776	2,788	1,790	43,420	124,458
3 Bundibugyo	2,233	1,447	1,373	1,059	759	654	627	8,152	1,846	1,100	973	720	484	302	249	5,674	13,826
4 Bushenyi	15,913	11,149	9,914	7,473	6,263	5,236	3,486	59,434	14,030	9,777	8,846	6,777	5,264	4,557	2,280	51,531	110,965
5 Gulu	10,827	7,789	6,529	5,482	4,599	3,507	3,035	41,768	8,139	5,227	3,979	3,031	2,270	1,721	1,084	25,451	67,219
6 Hoima	10,990	9,178	7,422	5,677	4,219	3,230	2,180	42,896	9,925	8,004	6,654	5,098	3,779	2,967	1,873	38,300	81,196
7 Iganga	8,633	6,993	7,363	5,987	5,183	4,092	4,023	42,274	7,916	6,338	6,527	5,662	4,603	3,596	2,858	37,500	79,774
8 Jinja	4,622	3,647	3,951	3,385	2,733	2,328	1,908	22,574	4,463	3,537	4,022	3,153	2,838	2,376	1,722	22,111	44,685
9 Kabale	11,268	9,018	7,951	6,361	5,016	4,226	3,620	47,460	9,399	7,129	6,146	4,763	3,630	2,847	1,988	35,902	83,362
10 Kaberole	13,825	10,157	8,901	7,004	5,295	4,163	3,499	52,844	11,935	8,863	7,731	5,775	4,248	3,378	2,556	44,486	97,330
11 Kalongala	204	139	120	77	70	59	32	701	201	101	121	80	76	53	40	672	1,373
12 Kampala	5,343	5,353	5,617	4,527	3,776	3,505	2,676	30,797	5,664	5,396	6,115	5,248	4,457	4,092	2,958	33,930	64,727
13 Kamuli	5,601	4,585	4,572	3,909	3,366	2,679	2,498	27,210	4,790	3,962	4,015	3,350	2,835	2,166	1,525	22,643	49,853
14 Kapchorwa	2,189	1,767	1,691	1,534	1,467	1,339	1,574	11,561	1,918	1,565	1,380	1,216	1,117	1,064	875	9,135	20,696
15 Kasese	5,337	4,369	4,168	3,453	2,657	2,045	1,781	23,810	4,481	3,588	3,464	2,722	1,964	1,469	944	18,612	42,422
16 Kitgum	11,363	9,711	8,180	6,288	5,373	4,600	3,739	49,254	7,777	5,765	4,253	2,903	2,378	1,517	818	25,403	74,657
17 Kotido	4,063	2,100	1,593	1,200	965	908	586	11,435	2,559	1,120	825	505	430	309	230	5,978	17,413
18 Kumi	8,773	6,695	5,514	4,532	3,726	2,992	2,326	34,558	7,100	4,660	3,629	2,813	2,293	1,705	1,088	23,288	57,846
19 Lira	10,648	9,519	8,571	7,146	6,815	6,464	6,134	55,297	8,685	6,631	5,288	3,674	3,621	2,729	1,915	32,543	87,840
20 Luwero	8,681	5,832	5,983	5,005	3,807	2,816	1,910	34,034	8,214	5,805	5,727	5,085	3,776	2,702	1,620	33,029	67,063
21 Masaka	6,332	5,664	5,235	4,860	4,047	3,359	2,489	31,986	6,436	5,921	5,750	5,103	4,598	3,765	2,705	34,278	66,264
22 Masindi	5,801	4,421	4,044	3,128	2,295	1,868	1,660	23,217	5,127	3,580	3,205	2,509	1,982	1,516	1,111	19,030	42,247
23 Mbale	16,257	13,235	13,063	11,592	10,099	8,110	6,309	78,665	15,356	12,424	11,636	10,399	8,751	7,023	4,905	70,494	149,159
24 Mbarara	11,466	8,353	7,804	6,354	5,156	4,285	3,864	47,282	10,075	7,420	6,848	5,467	4,531	3,573	2,633	40,547	87,829
25 Moroto	2,771	1,934	549	309	221	226	254	5,364	1,967	696	294	199	136	125	160	3,577	8,941
26 Moyo	4,101	3,376	2,815	2,185	1,786	1,531	1,399	17,273	3,209	2,288	1,849	1,191	922	608	406	10,473	27,746
27 Mpigi	12,600	9,792	10,043	8,369	6,820	5,293	4,189	57,106	13,000	10,453	10,810	9,165	7,897	6,600	5,001	62,944	120,050
28 Mubende	10,483	7,546	7,012	5,584	4,499	3,398	2,447	40,969	10,270	7,487	6,712	5,554	4,243	3,489	2,225	39,820	80,789
29 Mukono	12,781	9,764	9,976	8,107	6,617	5,084	4,196	56,525	12,343	9,358	9,728	8,110	6,791	5,485	3,903	55,718	112,243
30 Nebbi	9,317	5,967	4,932	3,945	3,152	2,551	2,353	32,217	6,753	3,870	3,096	2,227	1,400	1,073	763	19,182	51,399
31 Rakai	5,772	4,484	3,913	3,079	2,536	2,054	1,456	23,294	5,767	4,582	3,943	3,169	2,573	2,139	1,549	23,722	47,016
32 Rukungiri	6,745	5,616	4,894	4,208	3,122	2,754	2,623	29,982	6,627	5,318	4,650	3,777	2,850	2,364	1,789	27,175	57,157
33 Soroti	17,065	12,988	10,696	8,407	6,884	5,747	4,474	66,261	14,151	9,056	6,293	4,505	3,365	2,309	1,307	40,986	107,247
34 Tororo	18,174	13,341	12,872	11,000	9,112	7,603	6,743	78,845	14,841	10,664	10,097	8,402	6,940	5,365	3,906	60,215	139,060
TOTAL	313,639	236,804	217,295	177,449	146,759	121,758	103,017	1,316,721	269,446	195,826	176,798	140,910	114,024	90,607	62,574	1,050,193	2,366,914

Source : MOE 1990 School Census

BEST COPY AVAILABLE

TABLE E.3 PRIMARY SCHOOL TEACHERS BY GRADE, GENDER AND DISTRICT . 1990

DISTRICT	MALE									FEMALE									GRAND TOTAL	% UT
	G1	G2	G3	G4	G5	G6	L1	UT	TOTAL	G1	G2	G3	G4	G5	G6	L1	UT	TOTAL		
1 Apac	7	189	1,186	1	0	22	74	1,426	2,905	8	59	184	0	0	4	12	0	267	3,172	45%
2 Arua	26	261	479	2	1	6	400	547	1,722	7	95	169	0	0	6	51	97	425	2,147	30%
3 Bundibugyo	6	10	96	0	0	0	0	345	465	2	4	11	0	0	0	0	50	67	532	74%
4 Bushenyi	9	207	1,169	2	2	2	186	711	2,288	5	100	644	0	0	0	61	240	1,050	3,338	28%
5 Gulu	4	207	604	5	0	0	136	439	1,395	19	80	220	0	0	0	27	58	404	1,799	28%
6 Hoima	19	150	388	5	6	7	343	1,213	2,131	15	46	186	2	0	3	121	417	790	2,921	56%
7 Iganga	16	223	784	7	4	5	420	1,114	2,573	10	133	382	1	2	2	142	406	1,078	3,651	42%
8 Jinja	1	50	422	1	13	1	178	111	777	1	85	458	0	4	0	91	83	722	1,499	13%
9 Kabale	24	197	1,053	5	6	1	64	1,058	2,408	15	104	493	0	2	1	10	215	840	3,248	39%
10 Kabarole	21	285	628	9	4	1	55	1,409	2,412	14	186	466	0	0	0	16	513	1,195	3,607	53%
11 Kalangala	3	4	13	0	0	0	12	15	47	0	5	4	0	0	0	0	25	42	89	45%
12 Kampala	2	54	749	12	25	13	33	32	920	2	182	990	22	16	6	41	18	1,277	2,197	2%
13 Kamuli	21	127	534	12	12	2	120	905	1,733	13	86	214	0	1	1	60	344	719	2,452	51%
14 Kapchorwa	4	30	291	1	0	0	31	209	566	0	15	122	0	1	0	11	44	193	759	33%
15 Kasese	1	40	306	4	3	3	209	646	1,212	0	24	158	4	1	0	54	141	382	1,594	49%
16 Kitgum	11	126	521	0	4	0	26	947	1,635	6	52	87	0	0	1	5	136	287	1,922	56%
17 Kotido	8	49	159	0	0	0	47	214	477	1	9	23	0	0	0	5	25	63	540	44%
18 Kumi	7	142	659	0	2	0	20	409	1,239	10	74	263	0	0	0	1	50	398	1,637	28%
19 Lira	5	128	1,116	0	0	0	99	552	1,900	12	68	187	3	0	0	9	64	343	2,243	27%
20 Luwero	17	98	351	2	15	0	283	976	1,734	10	80	168	0	3	0	154	551	966	2,700	57%
21 Masaka	10	161	491	4	8	9	191	739	1,613	27	326	434	3	1	9	127	522	1,450	3,063	41%
22 Masindi	4	61	256	1	4	2	96	549	973	6	41	357	4	0	0	55	222	685	1,658	53%
23 Mbale	25	341	1,544	38	8	1	246	1,621	3,816	37	296	1,149	6	2	1	65	427	1,983	5,799	35%
24 Mbarara	23	241	990	1	5	31	459	838	2,588	12	137	566	1	0	8	193	258	1,175	3,763	29%
25 Moroto	0	18	124	0	0	0	47	68	257	0	11	62	0	1	0	9	5	90	347	21%
26 Moyo	22	135	124	0	0	3	92	248	624	14	47	36	0	0	1	13	35	146	770	37%
27 Mpigi	37	191	840	4	36	2	383	728	2,221	52	283	644	1	18	1	347	538	1,884	4,105	31%
28 Mubende	23	167	509	5	18	2	202	1,133	2,059	10	104	221	0	1	0	80	633	1,049	3,108	57%
29 Mukono	14	132	844	3	32	4	267	1,100	2,396	20	153	536	0	4	2	149	640	1,504	3,898	45%
30 Nebbi	11	219	424	8	4	0	245	1,057	1,968	11	65	89	4	0	0	31	127	337	2,295	52%
31 Rakai	9	120	231	0	2	1	59	728	1,150	10	92	77	0	1	0	47	400	627	1,777	63%
32 Rukungiri	8	142	691	0	1	7	117	378	1,344	3	82	341	1	0	1	35	85	568	1,892	24%
33 Soroti	12	283	963	4	6	0	153	1,419	2,840	1	90	336	0	0	0	5	191	623	3,463	46%
34 Tororo	47	563	1,888	8	8	1	737	1,392	4,644	23	381	870	2	1	1	169	273	1,720	6,364	26%
TOTAL	457	5,351	21,427	136	229	126	6,030	25,276	59,032	376	3,595	10,945	54	61	48	2,204	7,834	25,117	84,149	39%

Source : MOE 1990 School Census

206

207

BEST COPY AVAILABLE

TABLE E.4
PRIMARY STUDENT/TEACHER RATIOS & STUDENT/TRAINED TEACHER RATIOS, BY DISTRICT
1990

	DISTRICT	TOTAL TEACHERS	TRAINED TEACHERS	TOTAL STUDENTS	STUDENT/ TEA. RATIO	STUDENT/ TRAINED TEA. RATIO
1	Apac	3,172	1,746	83,062	26.2	47.6
2	Arua	2,147	1,503	124,458	58.0	82.8
3	Bundibugyo	532	137	13,826	26.0	100.9
4	Busheni	3,338	2,387	110,965	33.2	46.5
5	Gulu	1,799	1,302	67,219	37.4	51.6
6	Hoima	2,921	1,291	81,196	27.8	62.9
7	Iganga	3,651	2,131	79,774	21.8	37.4
8	Jinja	1,499	1,305	44,685	29.8	34.2
9	Kabale	3,248	1,975	83,362	25.7	42.2
10	Kabarole	3,607	1,685	97,330	27.0	57.8
11	Kalangala	89	49	1,373	15.4	28.0
12	Kampala	2,197	2,147	64,727	29.5	30.1
13	Kamuli	2,452	1,203	49,853	20.3	41.4
14	Kapchorwa	759	506	20,696	27.3	40.9
15	Kasese	1,594	807	42,422	26.6	52.6
16	Kitgum	1,922	839	74,657	38.8	89.0
17	Kotido	540	301	17,413	32.2	57.9
18	Kumi	1,637	1,178	57,846	35.3	49.1
19	Lira	2,243	1,627	87,840	39.2	54.0
20	Luwero	2,700	1,173	67,063	24.8	57.2
21	Masaka	3,063	1,801	66,264	21.6	36.8
22	Masindi	1,458	687	42,247	29.0	61.5
23	Mbale	5,799	3,751	149,159	25.7	39.8
24	Mbarara	3,763	2,667	87,829	23.3	32.9
25	Moroto	347	274	8,941	25.8	32.6
26	Moyo	770	487	27,746	36.0	57.0
27	Mpigi	4,105	2,839	120,050	29.2	42.3
28	Mubende	3,108	1,342	80,789	26.0	60.2
29	Mukono	3,898	2,158	112,243	28.8	52.0
30	Nebbi	2,295	1,111	51,399	22.4	46.3
31	Rakai	1,777	649	47,016	26.5	72.4
32	Rukungiri	1,892	1,429	57,157	30.2	40.0
33	Soroti	3,463	1,853	107,247	31.0	57.9
34	Tororo	6,364	4,699	139,060	21.9	29.6
	TOTAL	84,149	51,039	2,366,914	28.1	46.4

Source : MOE 1990 School Census

TABLE E.5 : CONDITION OF GOVERNMENT AIDED PRIMARY SCHOOL BUILDINGS BY DISTRICT . 1989

DISTRICT	SCHOOLS	NO. OF CLASS-ROOMS.					NO. OF OTHER ROOMS				
		PERM	SEMI-PERM	TEMP	TOTAL	RATIO % PERM/LT	PERM	SEMI-PERM	TEMP	TOTAL	RATIO % PERM/TL
1 Apac	230	281	776	760	1817	15.5	127	287	269	683	18.6
2 Arua	254	1169	324	723	2216	52.8	367	73	200	640	57.3
3 Bundibugyo	52	32	202	121	355	9.0	3	51	22	76	3.9
4 Busheni	451	1571	1265	611	3447	45.6	532	337	173	1042	51.1
5 Gulu	142	577	271	275	1123	51.4	222	65	72	359	61.8
6 Hoima	194	669	395	921	1985	33.7	168	160	103	431	39.0
7 Iganga	333	1080	318	883	2281	47.3	334	54	151	539	62.0
8 Jinja	84	502	142	99	743	67.6	185	16	12	213	86.9
9 Kabale	346	1250	1338	182	2770	45.1	378	333	92	803	47.1
10 Kabarole	209	912	585	944	2441	37.4	242	250	118	610	39.7
11 Kalangala	16	52	24	17	93	55.9	24	9	2	35	68.6
12 Kampala	71	874	37	11	922	94.8	346	9	6	361	95.8
13 Kamuli	175	658	180	309	1147	57.4	249	63	51	363	68.6
14 Kapchorwa	44	61	228	27	316	19.3	24	41	1	66	36.4
15 Kasese	150	293	396	484	1173	25.0	107	106	152	365	29.3
16 Kitgum	198	393	284	606	1283	30.6	130	101	85	316	41.1
17 Kotido	76	57	218	118	393	14.5	32	48	39	119	26.9
18 Kumi	115	498	161	134	793	62.8	135	15	25	175	77.1
19 Lira	210	265	650	800	1715	15.5	147	301	277	725	20.3
20 Luwero	161	738	185	112	1035	71.3	247	30	7	284	87.0
21 Masaka	241	1320	386	203	1909	69.1	369	63	27	459	80.4
22 Masindi	145	413	179	363	955	43.2	136	41	41	218	62.4
23 Mbale	416	680	1731	762	3173	21.4	249	402	104	755	33.0
24 Mbarara	394	664	1507	922	3093	21.5	222	393	278	893	24.9
25 Moroto	48	119	113	21	253	47.0	54	14	20	88	61.4
26 Moyo	60	220	0	109	329	66.9	133	0	9	142	93.7
27 Mpigi	340	1897	431	276	2604	72.8	768	134	28	930	82.6
28 Mubende	211	787	260	375	1422	55.3	219	176	48	443	49.4
29 Mukono	304	1365	356	375	2096	65.1	431	52	47	530	81.3
30 Nebbi	175	385	169	742	1296	29.7	97	43	138	278	34.9
31 Rakai	188	726	465	282	1473	49.3	223	91	59	373	59.8
32 Rukungiri	268	495	1196	257	1948	25.4	123	343	65	531	23.2
33 Soroti	331	670	296	1350	2316	28.9	215	60	152	427	50.4
34 Tororo	441	1029	908	1249	3186	32.3	323	183	263	769	42.0
TOTAL	7073	22702	15976	15423	54101	42.0	7561	4344	3136	15041	50.3

Source : MOE 1989 School Census

TABLE E.6
CENTRAL GOVERNMENT EXPENDITURE ON PRIMARY EDUCATION & UNIT COST BY DISTRICT.
1991 - 1992

	DISTRICT	SALARY U.Shs.'000	SCHOOL SUPPLIES U.Shs.'000	TOTAL U.Shs.'000	TOTAL STUDENTS	UNIT COST
1	Apac	307,763	132,847	440,611	83062	5.30
2	Arua	526,799	415,777	942,576	124458	7.57
3	Bundibugyo	104,058	42,928	146,987	13826	10.63
4	Busheni	499,962	251,425	751,387	110965	6.77
5	Gulu	361,137	182,670	543,807	67219	8.09
6	Hoima	399,407	226,532	625,939	81196	7.71
7	Iganga	462,046	281,159	743,205	79774	9.32
8	Jinja	185,906	145,232	331,138	44685	7.41
9	Kabale	517,402	334,180	851,582	83362	10.22
10	Kaberole	424,513	264,910	689,423	97330	7.08
11	Kalangala	21,365	4,766	26,131	1373	19.03
12	Kampala	350,167	216,369	566,536	64727	8.75
13	Kamuli	293,323	157,327	450,650	49853	9.04
14	Kapchorwa	103,311	63,093	166,404	20696	8.04
15	Kasese	210,364	127,979	338,343	42422	7.98
16	Kitgum	218,598	191,944	410,5[illegible]	74657	5.50
17	Kotido	60,863	81,354	142,2[illegible]7	17413	8.17
18	Kumi	223,375	171,906	395,2[illegible]2	57846	6.83
19	Lira	359,487	272,595	632,[illegible]82	87840	7.20
20	Luwero	310,583	200,397	510,9[illegible]1	67063	7.62
21	Masaka	356,352	242,978	599,330	66264	9.04
22	Masindi	221,150	103,911	325,060	42247	7.69
23	Mbale	723,264	414,027	1,137,292	149159	7.62
24	Mbarara	566,273	393,902	960,175	87829	10.93
25	Moroto	49,550	23,175	72,726	8941	8.13
26	Moyo	82,674	66,809	149,482	27746	5.39
27	Mpigi	541,360	434,082	975,442	120050	8.13
28	Mubende	371,768	241,727	613,495	80789	7.59
29	Mukono	402,953	308,[illegible]7	711,130	112243	6.34
30	Nebbi	235,593	142,110	377,703	51399	7.35
31	Rakai	264,153	212,230	476,383	47016	10.13
32	Rukungiri	234,496	181,563	416,059	57157	7.28
33	Soroti	548,338	295,529	843,867	107247	7.87
34	Tororo	825,429	393,820	1,219,248	139060	8.77
	TOTAL	11,363,782	7,219,429	18,583,211	2366914	7.85

Source : MOE for salaries ; MOLG for school supplies.
Enrollment data from 1990 School Census.

TABLE E.7 : PRIMARY SCHOOL CURRICULUM BY SUBJECT AND GRADE . 1991

SUBJECT	P.1	P.2	P.3	P.4	P.5	P.6	P.7
	Number of periods per subject per week.						
Language	11	11	10	10	9	7	6
Arithmetic	5	5	7	7	5	6	7
Science / Health	4	4	7	7	8	8	8
Social Studies	-	-	4	4	4	6	6
Religion	5	5	5	5	4	4	4
Arts /Crafts	2	2	2	2	2	2	2
Music	1	1	2	2	2	2	2
Physical Education	5	5	5	5	4	4	4
Total	33	33	42	42	38	39	39

Notes

1 For P.1 - P.4 periods are of 30 minutes duration.
For P.5 - P.7 periods are of 40 minutes duration.
2 Language:
In P.1 - P.2 (rural areas) the local language is usually taught.
In P.1 - P.2 (urban areas) English is taught.
In P.3 - P.7 English is taught throughout.

Source : MOE Primary School Inspectorate

TABLE E.8

SECONDARY ENROLLMENTS, ENROLLMENT RATIOS, TEACHERS AND STUDENT/TEACHER RATIOS BY DISTRICT, 1989

DISTRICT	SECONDARY SCHOOLS						POPULATION	
	Schools	Students	% Female	Teachers	% Untrained	Student/ Teacher	13-18 '000	GER %
KAMPALA	20	26,269	37%	1,156	14%	22.72	86.90	30.00
Kampala	20	26,269	37%	1,156	14%	22.72	86.9	30.00
CENTRAL	105	47,286	42%	2,191	37%	21.45	556.60	8.50
Kalangala								
Luwero	11	5,683	39%	231	40%	24.60	73.1	8.00
Masaka	22	7,334	37%	403	36%	18.20	115.3	6.00
Mpigi	25	13,573	46%	592	24%	22.93	112.6	12.00
Mubende	11	4,042	41%	214	47%	18.89	98.8	4.00
Mukono	23	11,324	39%	505	34%	22.42	104.3	11.00
Rakai	13	5,330	49%	246	39%	21.67	52.5	10.00
EASTERN	113	62,868	32%	2,704	36%	22.44	565.30	11.75
Iganga	12	8,485	39%	334	38%	25.40	117.2	7.00
Jinja	9	7,987	25%	424	17%	18.84	36.8	22.00
Kamuli	8	3,012	39%	156	38%	19.31	60.3	5.00
Kapchorwa	5	2,202	32%	105	59%	20.97	12.1	18.00
Kumi	3	1,822	30%	84	21%	21.69	41.1	4.00
Mbale	25	14,998	40%	680	39%	22.06	99.4	15.00
Soroti	13	4,896	22%	203	35%	24.12	82.3	6.00
Tororo	38	19,466	30%	718	37%	27.11	116.1	17.00
NORTHERN	99	35,922	29%	1,802	47%	19.76	422.80	7.67
Apac	15	6,271	26%	302	42%	20.76	57.5	11.00
Arua	20	6,771	26%	382	40%	17.73	82.4	8.00
Gulu	16	3,842	22%	226	32%	17.00	45.4	8.00
Kitgum	9	3,303	20%	142	52%	23.26	53.8	6.00
Kotido	3	670	30%	38	63%	17.63	31.1	2.00
Lira	23	10,304	19%	471	42%	21.88	66.2	16.00
Moroto	3	992	31%	49	67%	20.24	30.7	3.00
Moyo	4	1,650	62%	97	34%	17.01	17.6	9.00
Nebbi	6	2,119	26%	95	48%	22.31	38.1	6.00
WESTERN	187	62,118	34%	3,493	43%	20.57	623.20	9.44
Bundibugyo	2	1,205	25%	31	38%	38.87	21.4	6.00
Bushenyi	43	12,990	34%	746	47%	17.41	91	14.00
Hoima	12	4,332	41%	228	47%	19.00	57.9	7.00
Kabale	26	8,597	29%	482	40%	17.84	72.8	12.00
Kabarole	26	9,221	39%	424	39%	21.75	101.4	9.00
Kasese	8	3,078	33%	175	55%	17.59	56	5.00
Masindi	7	3,745	30%	171	34%	21.90	39.9	9.00
Mbarara	36	12,123	32%	797	39%	15.21	132.5	9.00
Rukungiri	27	6,827	40%	439	48%	15.55	50.3	14.00
TOTAL	524	234,463	35%	11,346	35%	21.39	2,254.80	13.47

Source : Evans, D. Republic of Uganda. A Pre-Investment Study : Teacher Education in Uganda 1990 - 2000. Table A5, page A7.

SECONDARY ENROLLMENT BY GRADE, GENDER AND DISTRICT 1990

TABLE E.9: SECONDARY SCHOOL ENROLLMENT BY GRADE , GENDER AND DISTRICT. 1990

DISTRICT	BOYS							GIRLS							GRAND TOTAL
	S1	S2	S3	S4	S5	S6	TOTAL	S1	S2	S3	S4	S5	S6	TOTAL	
1 Apac	1,053	1,048	1,820	851	113	84	4,969	490	454	360	269	22	22	1,617	6,586
2 Arua	1,313	1,253	1,115	993	370	317	5,361	535	457	379	321	82	93	1,867	7,228
3 Bundibugyo	389	340	275	182	57	43	1,286	148	151	93	51	5	4	452	1,738
4 Busheni	1,793	1,691	1,517	1,476	491	528	7,496	1,140	1,035	852	719	165	160	4,071	11,567
5 Gulu	1,044	942	781	493	265	166	3,691	314	331	265	123	34	32	1,099	4,790
6 Hoima	873	731	572	463	67	117	2,823	619	543	410	320	46	39	1,977	4,800
7 Iganga	1,435	1,404	1,219	983	170	219	5,430	1,146	1,009	915	663	191	232	4,156	9,586
8 Jinja	1,101	1,197	1,150	1,092	609	752	5,901	716	668	574	507	203	169	2,837	8,738
9 Kabale	1,335	1,286	1,163	1,048	424	377	5,633	571	506	459	301	78	94	2,009	7,642
10 Kabarole	1,411	1,300	1,224	1,071	407	415	5,828	1,000	1,033	805	624	99	94	3,655	9,483
11 Kalangala	14	15	7	13	0	0	49	20	7	5	3	0	0	35	84
12 Kampala	2,793	2,944	3,140	2,916	1,863	2,309	15,965	2,602	2,464	2,430	2,032	793	943	11,264	27,229
13 Kamuli	953	898	744	608	168	160	3,531	605	560	489	378	117	93	2,242	5,773
14 Kapchorwa	468	477	293	283	76	61	1,658	287	202	121	121	14	7	752	2,410
15 Kasese	674	635	535	447	85	85	2,461	384	362	239	162	25	22	1,194	3,655
16 Kitgum	794	620	518	388	90	144	2,554	331	174	188	102	6	14	815	3,369
17 Kotido	132	137	83	69	45	0	466	44	14	15	15	2	0	90	556
18 Kumi	310	323	290	271	52	82	1,328	183	188	168	132	10	19	700	2,028
19 Lira	1,965	1,998	1,866	1,850	612	794	9,085	532	559	439	349	93	163	2,135	11,220
20 Luwero	625	723	443	312	101	116	2,320	389	537	384	185	63	57	1,615	3,935
21 Masaka	1,020	831	849	589	193	256	3,738	918	889	761	494	107	71	3,240	6,978
22 Masindi	535	517	433	361	134	159	2,139	381	262	234	171	29	23	1,100	3,239
23 Mbale	2,378	2,364	2,219	1,889	643	659	10,152	1,717	1,647	1,425	1,192	201	194	6,376	16,528
24 Mbarara	1,824	1,653	1,594	1,440	480	471	7,462	1,160	1,014	882	735	143	149	4,083	11,545
25 Moroto	151	147	139	133	54	56	680	54	74	86	49	29	8	300	980
26 Moyo	456	380	342	254	23	23	1,478	159	141	94	74	7	7	482	1,960
27 Mpigi	1,903	1,738	1,499	1,249	427	486	7,302	2,362	2,051	1,639	1,402	462	365	8,281	15,583
28 Mubende	906	910	799	522	118	132	3,387	821	665	535	369	58	26	2,474	5,861
29 Mukono	1,822	1,686	1,523	1,184	407	432	7,054	1,834	1,596	1,284	873	244	203	6,034	13,088
30 Nebbi	708	631	560	404	205	201	2,709	445	349	330	202	159	150	1,635	4,344
31 Rakai	679	575	480	404	77	56	2,271	761	702	646	405	67	50	2,631	4,902
32 Rukungiri	1,067	985	977	840	155	229	4,253	898	805	726	552	111	156	3,248	7,501
33 Soroti	1,093	1,054	833	835	235	230	4,280	378	457	397	269	30	24	1,555	5,835
34 Tororo	3,316	3,322	3,119	2,418	944	1,044	14,163	1,821	1,720	1,422	1,133	155	165	6,416	20,579
TOTAL	38,333	36,755	34,121	28,331	10,160	11,203	158,903	25,765	23,626	20,051	15,297	3,850	3,848	92,437	251,340

Source : MOE 1990 School Census

213

213

BEST COPY AVAILABLE

TABLE E.10

SECONDARY SCHOOL TEACHERS BY FULL TIME/PART TIME, GENDER AND DISTRICT. 1990

DISTRICT	MALE			FEMALE			TEACHERS TOTAL
	FULL TIME	PART TIME	TOTAL	FULL TIME	PART TIME	TOTAL	
1 Apac	254	50	304	14	2	16	320
2 Arua	303	170	473	35	14	49	522
3 Bundibugyo	81	19	100	3	0	3	103
4 Busheni	565	273	838	103	23	126	964
5 Gulu	208	117	325	25	8	33	358
6 Hoima	208	136	344	19	8	27	371
7 Iganga	300	53	353	19	8	27	380
8 Jinja	288	69	357	135	10	145	502
9 Kabale	370	209	579	45	25	70	649
10 Kabarole	310	223	533	47	17	64	597
11 Kalangala	8	0	8	1	0	1	9
12 Kampala	610	231	841	473	54	527	1,368
13 Kamuli	257	39	296	35	4	39	335
14 Kapchorwa	106	15	121	11	2	13	134
15 Kasese	171	25	196	19	6	25	221
16 Kitgum	143	42	185	15	2	17	202
17 Kotido	18	11	29	2	0	2	31
18 Kumi	69	46	115	8	6	14	129
19 Lira	492	55	547	41	2	43	590
20 Luwero	135	55	190	28	5	33	223
21 Masaka	268	104	372	65	13	78	450
22 Masindi	132	113	245	18	12	30	275
23 Mbale	411	258	669	103	48	151	820
24 Mbarara	578	104	682	125	15	140	822
25 Moroto	37	7	44	13	0	13	57
26 Moyo	100	18	118	21	3	24	142
27 Mpigi	463	232	695	219	43	262	957
28 Mubende	245	97	342	40	7	47	389
29 Mukono	399	129	528	88	15	103	631
30 Nebbi	167	46	213	5	3	8	221
31 Rakai	154	100	254	31	6	37	291
32 Rukungiri	420	158	578	56	34	90	668
33 Soroti	167	140	307	22	9	31	338
34 Tororo	314	294	608	108	17	125	733
TOTAL	8,751	3,638	12,389	1,992	421	2,413	14,802

Source : MOE 1990 Secondary School Census

Table E. 11 MINISTRY OF EDUCATION PAYROLL, 1991/92
(in USh million)

Program	Monthly Payroll	Annual Payroll	Percent Distribution	--1990/91-- Budget	Actual
Headquarters	16.4	196.8	1.2	109	82
Teacher Education	59.9	718.8	4.5	397	300
Primary Teachers	950.0	11400.0	71.4	6293	4754
Secondary Teachers	243.8	2925.6	18.3	1615	1220
Technical Education	41.5	498.0	3.1	275	208
Higher Education (Mbarara)	19.5	234.0	1.5	129	98
Total	1331.1	15973.2	100.0	8817	6661

Source: Ministry of Education

TABLE E.12 : SECONDARY SCHOOL CURRICULUM BY SUBJECT AND GRADE 1991

SUBJECT	S1 & S2 No. Periods/week 14 Subjects		S3 & S4 No.Periods/week 9 or 10 Subjects	
	(Note 2)	(Note 3)	(Note 2)	(Note 5)
English Language	6-7	*	6-7	*
Mathematics	6-7	*	6-7	*
Physics	2	*	3-4	**
Chemistry	2-3	*	3-4	**
Biology	2-3	*	3-4	**
Geography	2-3	*	3-4	**
History	2-3	*	3-4	**
Woodwork	3	**	4	***
Metalwork	3	**	4	***
Technical Drawing	2	**	3-4	***
Home Economics	3-4	**	4-6	***
Business Studies	2-3	**	4-6	***
Agriculture	3-4	**	4-6	***
Art & Craft	2-3	**	3	***
Literature in English	0		3	****
Other Languages (Note 4)	3-4	***	4-5	****
Religious Education	2-3	***	3-4	****
Music	1-3	***	3-4	****
Political Education	1-2	*	3-4	****
Physical Education	1-2	***	0	

Notes

1 Schools work on a timetable of 40 lessons a week.
2 Numbers to the left of the hyphen indicate minimum number of lessons taught per week, while those to the right indicate maximum number of lessons per week.
3 For S.1 and S.2 :
(*) compulsory subject.
(**) choice of at least 3 subjects, including agriculture, from this group.
(***) choice of at least 5 subhects, inlcuding P.E., from this group.
4 "Other Languages" include French, Latin, German, Luganda and Kiswahili.
5 For S.3 and S.4 :
(*) compulsory subject
(**) choice of at least 4 subjects.
(***) choice of at least 1 subject.
(****) choice of at least 1 subject.
"Other Languages" are the same as Note 4 above.

Source : MOE Secondary School Inspectorate

TABLE E.13 :PROJECTS IN THE FIVE YEAR INVESTMENT PROGRAM (U.S.$ '000)

CODE	PROJECT NAME	PHASE 1 1990-92	PHASE 2 1993-96	PHASE 3 1996 +	TOTAL COST
111	Primary School Expansion	22,000	22,000	22,000	66,000
112	Secondary Schools Laboratories, Workshops, Libraries	15,000	22,000	22,000	59,000
113	Secondary School Expansion	12,000	12,000	0	24,000
114	Non-formal Education	0	8,030	7,800	15,830
121	Program for Orphans	250	4,000	9,550	13,800
122	Service to Handicapped, Gifted & Female Students	8,000	400	700	9,100
123	Interactive Radio Learning - Classroom	1,791	0	0	1,791
124	Interactive Radio Learning - Teachers	889	0	0	889
125	Interactive Radio Learning - Marginalized Population	1,101	0	0	1,101
126	Interactive Radio Learning - Aids Education	316	0	0	316
211	Curriculum Reform	1,626	0	0	1,626
212	Strengthening NCDC	1,300	0	0	1,300
213	Strengthening STEPU	4,184	0	0	4,184
221	Book Provision Capacity	12,000	12,000	17,000	41,000
222	Book Production Capacity	4,712	4,680	0	9,392
231	Continuous Assessment	2,000	0	0	2,000
232	Examination Reform	5,000	4,100	0	9,100
241	Condition of Service	32,000	32,000	0	64,000
251	Pre-Service Training	22,800	27,223	17,520	67,543
252	Reducing Un-trained Teachers	25,764	10,900	5,436	42,100
253	Support for Practicing Teachers	16,540	9,000	5,700	31,240
261	Vocational Education Primary Schools	17,085	0	0	17,085
262	Vocational Education Secondary Schools	13,630	0	0	13,630
263	Science Education in Secondary Schools	28,500	15,600	0	44,100
271	Technical Education	1,000	0	0	1,000
272	Rehabilitation of Technical Schools	8,400	9,400	4,400	22,200
273	Rehabilitation of Colleges & Polytechnics	8,800	9,815	3,400	22,015
311	EPDO	4,400	0	0	4,400
312	School Mapping	1,000	0	0	1,000
321	Comprehensive Management Audit	280	0	0	280
322	Management Training - Heads of Institutions	2,800	0	0	2,800
323	Intermediate-Staff Level Training	2,500	0	0	2,500
324	Training of Senior Managers	400	0	0	400
325	Educational Management Training Centre	0	2,300	0	2,300
326	Degree Programmes in Education Management	0	2,000	0	2,000
421	Support for Basic Education	2,500	0	0	2,500
422	Instructional Materials - Tertiary	7,000	0	0	7,000
423	National Finance Plan	280	0	0	280
424	Comprehensive Accounting System	1,600	0	0	1,600
	TOTAL EXPENDITURE (U.S.$ '000)	289,448	207,448	115,506	612,402

Source : Republic of Uganda. Projects in Five Year Investment Programme

Annex Table H.1: Major Causes of Outpatient Morbidity, Uganda, 1988 - 1990

	1988		1989		1990	
Disease Name	Rank	Percent	Rank	Percent	Rank	Percent
Malaria	1	20.2	1	21.7	1	22.6
Upper Respiratory Diseases	2	13.8	2	16.1	2	15.6
Trauma / Injuries	3	9.7	3	9.6	3	9.1
Intestinal Worms	5	7.6	5	7.5	4	7.7
Diarrhoeal Diseases	4	9.1	4	8.7	5	7.0
Lower Respiratory Diseases	7	6.3	7	5.3	6	5.9
Skin Diseases	6	6.7	6	7.4	7	5.6
Other Eye Infections	8	5.1	8	4.7	8	4.5
Ear Infections			10	2.3	9	2.1
Anaemias	9	3.4	9	2.4	10	1.9
Sexually Transmitted Diseases	10	2.8			11	
All other diseases		15.3		14.4		18.0
Number of recorded visits	2,840,448		4,208,705		6,952,681	

Source: Republic of Uganda, Ministry of Health, Health Planning Unit (1991) Health Information Quarterly 8(3), September.

Annex Table H.2: Major Causes of Inpatient Mortality, Uganda, 1988 - 1990

	1988		1989		1990	
Disease Name	Rank	Percent	Rank	Percent	Rank	Percent
Malaria	2	9.6	3	8.4	1	14.2
AIDS or HIV Infection	6	4.8	2	8.9	2	9.3
Diarrhoeal Diseases	1	10.4	1	11.1	3	8.7
ARI / Pneumonia	4	8.1	4	7.7	4	7.9
Anaemias	5	7.5	5	7.4	5	7.3
Nonmeningoccal Meningitis	8	4.2	7	5.2	6	5.6
Nutritional Deficiencies	3	8.8	6	6.0	7	5.4
Tuberculosis	9	3.9	8	4.6	8	4.5
Tetanus	10	3.5	10	3.3	9	3.3
Trauma / Injuries			9	3.5	10	3.1
Measles	7	4.4				
All other diseases		34.7		33.9		30.6
Number of recorded deaths	4,689		3,545		5,439	

Source: Republic of Uganda, Ministry of Health, Health Planning Unit (1991) Health Information Quarterly 8(3), September.

Table H.3: Distribution of Health Facilities, Uganda, 1991

District	Hospitals			Clinics	Population per Unit
	Tertiary	Secondary	Primary		
Kalangala	0	0	1	3	4,100
Kampala	6	0	16	105	6,072
Kiboga	0	1	1	8	14,080
Luwero	0	2	9	29	11,136
Masaka	1	2	10	41	15,393
Mpigi	0	4	23	73	9,153
Mubende	0	2	9	30	12,035
Mukono	0	6	10	47	13,023
Rakai	0	1	9	20	12,733
Iganga	0	3	7	58	13,950
Jinja	1	1	14	19	8,139
Kamuli	0	1	16	13	15,846
Kapchorwa	0	1	2	11	8,307
Kumi	0	3	4	16	10,300
Mbale	1	1	19	59	8,795
Pallisa	0	1	4	20	14,240
Soroti	0	1	11	38	8,618
Tororo	0	3	7	47	9,775
Apac	0	2	8	12	21,263
Arua	1	3	11	42	10,893
Gulu	0	3	7	12	15,395
Kitgum	0	3	4	17	14,596
Kotido	0	2	4	18	7,946
Lira	0	1	9	31	12,055
Moroto	1	2	2	15	8,570
Moyo	0	2	2	19	7,761
Nebbi	0	3	9	28	7,963
Bundibugyo	0	1	3	16	5,800
Bushenyi	0	2	10	20	23,203
Hoima	0	2	8	27	5,346
Kabale	1	0	6	27	12,141
Kabarole	1	2	14	26	17,376
Kasese	0	2	7	24	10,392
Kibale	0	0	0	3	73,100
Kisoro	0	2	0	4	30,817
Masindi	0	2	3	17	11,522
Mbarara	1	2	9	40	17,874
Rukungiri	0	3	8	26	10,486
Total	14	72	296	1061	11,491

Region	Tertiary	Secondary	Primary	Clinics	Population per Unit
Central	7	18	88	357	10,265
Eastern	2	15	84	281	10,759
Northern	2	21	56	194	11,461
Western	3	18	68	229	14,201
Total	14	72	296	1061	11,491

Notes: Tertiary is a regional hospital or above, including Mulago and NGO equivalents
Secondary is a district-level hospital, including NGO equivalents
Primary is a health-center-type clinic with some inpatient care, including dispensaries with maternity and private maternities
DMO is a District Medical Office or similar unit in Kampala
Central denotes national functions

Sources: Republic of Uganda, Ministry of Health, Health Planning Unit, 1988. "Inventory of Health Care Facilities."
Uganda Essential Drugs Management Program, 1991. Inventory and Delivery Records
Republic of Uganda, Ministry of Health, Office of the Registrar, Uganda Medical Practitioners and Dental Surgeions countcil, 1991. Summaries of Registration Lists.

Table H.3A: Distribution of Government Facilities, Uganda, 1991

District	Hospitals			Clinics	Population per Unit
	Tertiary	Secondary	Primary		
Kalangala	0	0	1	3	4,100
Kampala	3	0	3	2	96,675
Kiboga	0	1	1	6	17,600
Luwero	0	1	5	18	18,717
Masaka	1	0	5	20	31,973
Mpigi	0	3	8	35	19,900
Mubende	0	2	6	14	22,614
Mukono	0	2	6	20	29,150
Rakai	0	1	7	14	17,364
Iganga	0	2	7	48	16,561
Jinja	1	0	10	8	14,995
Kamuli	0	0	13	9	21,850
Kapchorwa	0	1	1	9	10,573
Kumi	0	1	3	13	13,935
Mbale	1	1	9	36	15,034
Pallisa	0	1	1	15	20,941
Soroti	0	1	5	25	13,900
Tororo	0	2	6	22	18,467
Apac	0	1	4	9	32,907
Arua	1	1	7	27	17,350
Gulu	0	2	7	7	21,169
Kitgum	0	1	4	15	17,515
Kotido	0	2	2	18	8,668
Lira	0	1	5	20	19,165
Moroto	1	0	2	10	13,185
Moyo	0	2	2	17	8,500
Nebbi	0	1	4	20	12,636
Bundibugyo	0	1	2	12	7,733
Bushenyi	0	1	8	11	36,740
Hoima	0	2	7	22	6,381
Kabale	1	0	5	24	13,760
Kabarole	1	0	11	21	22,467
Kasese	0	0	5	13	19,056
Kibale	0	0	0	0	ERR
Kisoro	0	1	0	3	46,225
Masindi	0	2	3	9	18,107
Mbarara	1	1	8	22	29,050
Rukungiri	0	1	5	15	18,476
Total	11	39	188	612	19,509

Region	Tertiary	Secondary	Primary	Clinics	Population per Unit
Central	4	10	42	132	25,650
Eastern	2	9	55	185	16,376
Northern	2	11	37	143	16,213
Western	3	9	54	152	20,739
Total	11	39	188	612	19,509

Table H.3B: Distribution of Non-Government Organization Facilities

District	Hospitals			Clinics	Population per Unit
	Tertiary	Secondary	Primary		
Kalangala	0	0	0	0	ERR
Kampala	3	0	1	6	77,340
Kiboga	0	0	0	2	70,400
Luwero	0	1	4	4	49,911
Masaka	0	2	4	11	48,900
Mpigi	0	1	7	12	45,770
Mubende	0	0	2	9	45,227
Mukono	0	4	1	8	62,785
Rakai	0	0	2	4	63,667
Iganga	0	1	0	3	236,000
Jinja	0	1	2	1	71,225
Kamuli	0	1	3	1	96,140
Kapchorwa	0	0	1	2	38,767
Kumi	0	2	1	3	39,483
Mbale	0	0	3	12	47,107
Pallisa	0	0	3	5	44,500
Soroti	0	0	6	13	22,679
Tororo	0	1	1	10	46,167
Apac	0	1	3	2	76,783
Arua	0	2	3	4	69,400
Gulu	0	1	0	5	56,450
Kitgum	0	2	0	2	87,575
Kotido	0	0	2	0	95,350
Lira	0	0	2	4	83,050
Moroto	0	2	0	5	24,486
Moyo	0	0	0	2	89,250
Nebbi	0	2	3	3	39,488
Bundibugyo	0	0	1	4	23,200
Bushenyi	0	1	2	4	104,971
Hoima	0	0	1	3	49,450
Kabale	0	0	1	3	103,200
Kabarole	0	2	3	2	105,914
Kasese	0	2	0	1	114,333
Kibale	0	0	0	3	73,1[illegible]
Kisoro	0	1	0	1	92,450
Masindi	0	0	0	4	63,375
Mbarara	0	1	1	2	232,400
Rukungiri	0	2	3	5	38,800
Total	3	33	66	165	62,107

Region	Tertiary	Secondary	Primary	Clinics	Population per Unit
Central	3	8	21	56	54,798
Eastern	0	6	20	50	54,083
Northern	0	10	13	27	62,582
Western	0	9	12	32	85,304
Total	3	33	66	165	62,107

Table H.3C: Distribution of Private Facilities

District	Hospitals			Clinics	Population per Unit
	Tertiary	Secondary	Primary		
Kalangala	0	0	0	0	ERR
Kampala	0	0	12	97	7,071
Kiboga	0	0	0	0	ERR
Luwero	0	0	0	7	61,224
Masaka	0	0	1	10	75,538
Mpigi	0	0	8	26	26,913
Mubende	0	0	1	7	59,674
Mukono	0	0	3	19	37,655
Rakai	0	0	0	2	190,905
Iganga	0	0	0	7	141,529
Jinja	0	0	2	10	23,732
Kamuli	0	0	0	3	144,138
Kapchorwa	0	0	0	0	ERR
Kumi	0	0	0	0	ERR
Mbale	0	0	7	11	38,530
Pallisa	0	0	0	0	ERR
Soroti	0	0	0	0	ERR
Tororo	0	0	0	15	37,754
Apac	0	0	1	1	276,365
Arua	0	0	1	11	50,620
Gulu	0	0	0	0	ERR
Kitgum	0	0	0	0	ERR
Kotido	0	0	0	0	ERR
Lira	0	0	2	7	53,368
Moroto	0	0	0	0	ERR
Moyo	0	0	0	0	ERR
Nebbi	0	0	2	5	47,368
Bundibugyo	0	0	0	0	ERR
Bushenyi	0	0	0	5	157,378
Hoima	0	0	0	2	98,851
Kabale	0	0	0	0	ERR
Kabarole	0	0	0	3	277,886
Kasese	0	0	2	10	28,571
Kibale	0	0	0	0	ERR
Kisoro	0	0	0	0	ERR
Masindi	0	0	0	4	63,343
Mbarara	0	0	0	16	58,071
Rukungiri	0	0	0	6	64,634
Total	0	0	42	284	50,845

Region	Tertiary	Secondary	Primary	Clinics	Population per Unit
Central	0	0	25	169	24,889
Eastern	0	0	9	46	74,701
Northern	0	0	6	24	104,262
Western	0	0	2	45	95,470
Total	0	0	42	284	50,845

Table H.4: Distribution of Hospital Beds, Uganda, 1991

District	Beds			Population per Bed
	Government	NGO	Total	
Kalangala	0	0	0	ERR
Kampala	2397	926	3323	233
Kiboga	104	0	104	1354
Luwero	104	85	189	2377
Masaka	304	325	629	1322
Mpigi	234	40	274	3341
Mubende	170	0	170	2926
Mukono	220	325	545	1498
Rakai	0	0	0	ERR
Iganga	218	100	318	2969
Jinja	356	138	494	577
Kamuli	0	130	130	3698
Kapchorwa	56	0	56	2077
Kumi	104	310	414	572
Mbale	447	0	447	1581
Pallisa	104	0	104	3423
Soroti	173	0	173	2491
Tororo	320	109	429	1291
Apac	100	210	310	1486
Arua	267	200	467	1337
Gulu	315	300	615	551
Kitgum	89	453	542	646
Kotido	208	0	208	917
Lira	222	0	222	2245
Moroto	115	282	397	432
Moyo	215	0	215	830
Nebbi	104	300	404	782
Bundibugyo	104	0	104	1115
Bushenyi	108	100	208	3533
Hoima	197	0	197	1004
Kabale	184	0	184	2243
Kabarole	166	221	387	1916
Kasese	0	270	270	1270
Kibale	0	0	0	ERR
Kisoro	132	147	279	663
Masindi	181	0	181	1401
Mbarara	350	80	430	2162
Rukungiri	106	331	437	888
Total	8474	5382	13856	1197

Region	Government	NGO	Population per Bed
Central	3533	1701	921
Eastern	1778	787	1602
Northern	1635	1745	926
Western	1528	1149	1689
Total	8474	5382	1197

Table H.5: Distribution of Ministry of Health Personnel, Uganda, 1991

Region	Physicians	Registered Nurses	Registered Midwives	Other Professional	Group Employees	Total	Population Per Physicia	Population Per Nurse Midwife
Kalangala	0	0	0	0	0	0		
Kampala	284	329	143	1643	1717	4116	2723	1639
Kiboga	5	12	0	67	171	255	28160	11733
Luwero	8	11	0	141	0	160	56150	40836
Masaka	17	29	0	285	258	589	48900	28666
Mpigi	42	57	5	586	326	1016	21795	14765
Mubende	12	29	12	134	333	520	41458	12134
Mukono	7	22	3	206	148	386	116600	32648
Rakai	4	3	0	69	86	162	95500	127333
Iganga	14	34	2	396	328	774	67429	26222
Jinja	45	98	0	456	364	963	6331	2907
Kamuli	1	6	0	111	0	118	480700	80117
Kapchorwa	4	8	0	49	224	285	29075	14538
Kumi	5	6	0	130	118	259	47380	39483
Mbale	27	54	23	406	454	964	26170	9177
Pallisa	4	10	0	87	200	301	89000	35600
Soroti	5	35	0	125	215	380	86180	12311
Tororo	12	41	0	306	377	736	46167	13512
Apac	3	15	0	125	211	354	153567	30713
Arua	12	51	16	207	154	440	52050	9322
Gulu	8	24	0	183	222	437	42338	14113
Kitgum	9	10	0	72	198	289	38922	35030
Kotido	6	3	0	51	0	60	31783	63567
Lira	3	29	0	126	207	365	166100	17183
Moroto	3	3	0	27	154	187	57133	57133
Moyo	2	11	0	72	371	456	89250	16227
Nebbi	8	9	0	104	170	291	39488	35100
Bundibugyo	3	6	0	42	193	244	38667	19333
Bushenyi	4	17	0	102	125	248	183700	43224
Hoima	7	19	2	142	327	497	28257	9419
Kabale	6	22	0	91	86	205	68800	18764
Kabarole	12	24	1	157	180	374	61783	29656
Kasese	0	0	0	0	0	0		
Kibale	0	0	0	0	159	159		
Kisoro	1	3	0	17	69	90	184900	61633
Masindi	7	38	0	195	178	418	36214	6671
Mbarara	16	39	4	229	306	594	58100	21619
Rukungiri	5	11	0	80	141	237	77600	35273
Total	611	1118	211	7219	8770	17929	27140	12478

Region	Physicians	Registered Nurses	Registered Midwives	Other Professional	Group Employees	Population Per Physician	Population Per Nurse Midwife
Central	379	492	163	3131	3039	12723	7362
Eastern	117	292	25	2066	2280	35131	12966
Northern	54	155	16	967	1687	57946	18299
Western	61	179	7	1055	1764	74116	24307
Total	611	1118	211	7219	8770	27140	12478

Table H.6: Tabulations from the Family Household Budget Survey, Uganda, 1989 or 1990

Nearest Caregiver

	Private	NGO	Gov't	Other	Total	Sample
Arua	14	35	30	22	100	98
Bushenyi	44	15	22	19	100	172
Kabale	12	17	17	54	100	89
Kabarole	33	7	48	12	100	148
Kamuli	31	16	34	18	100	153
Kapchorwa	46	0	48	6	100	48
Masaka	14	64	5	17	100	194
Mukono	49	7	21	23	100	181
Tororo	8	4	69	19	100	182
Overall	28	20	32	21	100	1265

Preferred Caregiver

	Private	NGO	Gov't	Other	Total	Sample
Arua	5	29	54	12	100	97
Bushenyi	33	28	34	5	100	166
Kabale	14	27	19	40	100	97
Kabarole	25	13	50	11	100	139
Kamuli	16	37	36	11	100	150
Kapchorwa	61	0	28	12	100	43
Masaka	8	55	35	2	100	191
Mukono	34	21	38	7	100	167
Tororo	12	10	59	19	100	174
Overall	21	27	41	12	100	1224

Choice of Provider for Residents Sick During Last Two Weeks

	Number	Percent
Private	192	18%
NGO	139	13%
Gov't	224	21%
Other	514	48%
Total	1069	100%

Detailed Information by Chosen Provider for the Ill, Last Two Weeks

	Number	Percent	Wait Less than	No		Range for Payers
Private Clinic	192	18%	86	16	943	40 - 10,000
NGO Health Center	84	8%	52	20	2457	50 - 60,000
NGO Hospital	55	5%	56	35	2636	300 - 39,000
Gov't Health Center	124	12%	61	74	506	50 - 30,000
Gov't. Hospital	100	9%	62	73	961	10 - 40,000
CHW/TBA	12	1%	92	50	279	200 - 1,400
Family Member	94	9%	96	81	186	40 - 4,100
Herbal Healer	129	12%	81	45	880	30 - 30,300
Market/Shop	197	18%	98	14	499	20 - 8,000
Neighbor	42	4%	88	64	502	60 - 12,000
Pharmacy	13	1%	100	31	422	180 - 1,000
Spiritual Healer	20	2%	60	40	4131	20 - 40,000
Other	7	1%	86	57	200	200 - 600
Total	1069	100%	41	41	968	10 - 60,000

Summary of Expenditure Classes

Total Expenses	Percent
Nothing	41
100 or less	9
100 to 500	21
500 to 1000	13
Over 1000	16
Total	100

Note:

Private = Private Clinic
NGO = NGO Health Center or Hospital
Gov't = Government Health Center or Hospital
Other = Family member, neighbor, spiritual healer, herbal healer herbal healer, CHW/TBA, market/shop, pharmacist/chemist

Payments tend to be for drugs, not for professional fees. For example, 86.4 percent of private clinic patients paid nothing for the diagnosis.

82.3 percent of the sample walked to the facility; 89 percent incurred no transport cost

Source:

Makere University, Child Health and Development Center, Family Household Health Budget Study," 1991

BEST COPY AVAILABLE

Table H.7: Tabulations from the Demographic and Health Survey, Uganda, 1988/89

Prenatal Care by Residence for Births During the Last Five Years, 1988/89

	Doctor	Nurse Midwife	TBA	Other	None	Tetanus Toxoid	Births
West Nile	12	55	2	0	31	58	274
East	7	86	1	0	4	89	1378
Central	20	71	0	0	9	48	1267
West	3	80	3	6	28	52	319
South West	5	78	0	0	16	46	1499
Kampala	34	61	0	0	3	80	267
Overall	11	76	1	1	12	56	5004

Prenatal Care by Education for Births During the Last Five Years, 1988/89

	Doctor	Nurse Midwife	TBA	Other	None	Tetanus Toxoid	Births	Frequency
No Education	7	74	1	1	17	50	2071	41%
Some Primary	10	78	1	0	10	56	2058	41%
Primary Completed	17	79	0	0	4	65	448	9%
Middle	23	71	0	2	3	72	310	6%
Higher	44	54	0	0	1	73	117	2%
Overall	11	76	1	1	12	56	5004	100%

Delivery Assistance by Residence for Births During the Last Five Years, 1988/89

	Doctor	Nurse Midwife	TBA	Relative	Other	None	Births
West Nile	1	17	23	38	0	20	274
East	2	46	5	34	2	11	1378
Central	4	48	7	32	1	8	1267
West	1	20	10	46	4	18	319
South West	1	16	4	43	2	33	1499
Kampala	18	69	1	7	1	3	267
Overall	3	36	6	36	2	17	5004

Delivery Assistance by Education for Births During the Last Five Years, 1988/89

	Doctor	Nurse Midwife	TBA	Relative	Other	None	Births	Frequency
No Education	1	22	6	40	2	26	2071	41%
Some Primary	3	38	6	38	2	13	2058	41%
Primary Completed	4	55	6	28	1	7	448	9%
Middle	8	66	2	18	1	4	310	6%
Higher	16	70	4	2	0	6	117	2%
Overall	3	36	6	36	2	17	5004	100%

Immunization Patterns by Education for Mothers with Children Aged 12 to 23 Months, 1988/89

		Of Those with Health Card						
	Health Card	BCG	DPT 3	Measles	Fully Immunized	Minimum Fully Immunized	No Card but Some Immunization	Number
No Education	45	98	43	67	36	16	18	375
Some Primary	50	98	60	72	50	25	25	416
Primary Completed	56	99	61	74	51	28	19	83
Middle	58	100	95	83	83	48	34	48
Higher	84	100	87	93	80	51	28	27
Overall	49	98	57	72	48	24	22	947

Note:

West Nile = Arua, Moyo, Nebbi
East = Iganga, Jinja, Kamuli, Mbale, Tororo
Central = Luwero, Masaka, Mpigi, Mubende, Mukono, Rakai
West = Bundibugyo, Hoima, Kabarole, Masindi
South West = Bushenyi, Kabale, Kasese, Mbarara, Rukungiri

Primary Completed = Junior 1
Middle = Junior 2 or Junior 3, plus Secondary below 4
Higher = More than Secondary 4, or at least 2 years vocational after Secondary 3.

Minimum Fully Immunized = Percent of Children with Health Card and Fully Immunized
No Card but Some Immunization = No Health Card but Mother Reports at Least 1 Immunization

Source:

Republic of Uganda, Ministry of Health, "Uganda Demographic and Health Survey 1988/1989," October 1989.

Table H.8: Estimated Recurrent Expenditures for Health from All Sources, Uganda, 1989/90

	Local Funds			Foreign Assistance		Total		
	Amount	Percent	Percent of GDP	Amount	Percent	Amount	Percent	Percent of GDP
Ministry of Health	4,097	14	0.3	7,585	89	11,682	30	0.9
Ministry of Local Government	171	1	0.0	341	4	512	1	0.0
Mulago Hospital	1,572	5	0.1	77	1	1,649	4	0.1
Local Governments	816	3	0.1	0	0	816	2	0.1
NGO Donations	822	3	0.1	500	6	1,322	3	0.1
Private Spending	22,644	75	1.8	0	0	22,644	59	1.8
Total	30,122	100	2.4	8,503	100	38,625	100	3.1
Central Government	5,840	19	0.5	8,003	94	13,843	36	1.1
Local Government	816	3	0.1	0	0	816	2	0.1
Charitable	822	3	0.1	500	6	1,322	3	0.1
Private	22,644	75	1.8	0	0	22,644	59	1.8
Total	30,122	100	2.4	8,503	100	38,625	100	3.1

Source: FH tables and authors's estimates.

Notes: Local spending is estimated on a per capita basis for a handful of districts with complete data and multiplied by the population of Uganda. The numbers were hand transcribed from documents at the MOLG. NGO donations are estimated from a sample of five NGO hospitals and is the shortage of fees relative to costs, divided by the number of beds. It is expanded to the whole sector by multiplying the resulting per-bed figure by the number of NGO beds in Uganda. This estimate will be minimal, as most NGOs receive some contributions of labor and drugs. Private spending is from the Household Budget Survey, 1989/90.

Table H.9: Rough Estimates of Distribution of Spending by Health Problem, 1989/90

			Category 1	Category 2	Category 3	Percent
	Number	Bed-days	Community	Preventive	Curative	Curative
Malaria	12,257	75,923	324	1624	3214	62
ARI	4,260	31,634	324	565	1339	60
Trauma	3,637	49,729	324	482	2105	72
Tuberculosis	2,952	118,868	324	391	5031	88
Anemias	2,246	17,857	324	298	756	55
AIDS	1,787	22,656	324	237	959	63
Malnutrition	1,600	29,676	324	212	1256	70
Meningitis	1,009	10,069	324	134	426	48
Diarrhea	785	7,417	324	104	314	42
Tetanus	257	1,983	324	34	84	19
Subtotal	30,790	365,812				
Other	35,745	349,059	324	4306	14775	76
Total	66,535	714,871				
Expenditure by Category						
Central			2922	4885	10615	
Local Govt			231	264	827	
Charitable			408	272	136	
Private			0	3397	18681	
Total			3561	8818	30259	

Table H.10: MOH Proposed Fees Compared to Fees at a Kampala NGO Hospital

	MOH Proposed Fees June 1990		Kampala NGO January 1991	
	Public	Private	Public	Private
Mulago Hospital				
Outpatient (first visit)				
Dispensary	300		300-700+	
Specialist	700	2-3,000		1500+
Casualty	700		500+	
Inpatient (per week)				
Old Wards	600		4200	
New Wards	1400	14-21000	19250	31150
Referral Hospitals				
Outpatient	500	2-3000		
Inpatient	1000	14-21000		
District/Rural Hospitals				
Outpatient	300	2-3000		
Inpatient	600	7-10500		
Health Center				
Outpatient	200			
Inpatient	400			

Note: All Prices in Uganda Schillings
These are basic fees, there are many add-ons

LIST OF STATISTICAL APPENDIX TABLES

Fiscal Data

Fiscal - general

FG.1 Key Macroeconomic Data
FG.2 Central Government Budgetary Operations
FG.2a Central Government Budgetary Operations, as a Percent of GDP
FG.3 Sectoral Distribution of Central Government Expenditure
FG.4 Government-Recommended Monthly Incentive Payment

Fiscal - education

Locally-controlled expenditure

FE.1 Recurrent Expenditure in the Education Sector, by Program
FE.2 Section 1 Capital Expenditure in the Education Sector, by Program
FE.3 Locally-controlled Section 2 Expenditure in the Education Sector, by Project
FE.4 Total Locally-controlled Central Government Expenditure in the Education Sector, by Program

Donor disbursements

FE.5 Donor-financed Section 2 Expenditure in the Education Sector, by Project

Total Central Government expenditure

FE.6 Total Central Government Expenditure in the Education Sector, by Program
FE.6a Total Central Government Expenditure in the Education Sector, by Percent

Fiscal-health

Locally-controlled expenditure

FH.1 Recurrent Expenditure in the Health Sector, by Program
FH.2 Section 1 Capital Expenditure in the Health Sector, by Program
FH.3 Locally-controlled Section 2 Expenditure in the Health Section, by Project
FH.4 Total Locally-controlled Central Government Expenditure in the Health Sector, by Program

Donor disbursements

FH.5 Donor-financed Section 2 Expenditure in the Health Sector, by Project
FH.5a List of projects outside budget document

Total Central Government expenditure

FH.6 Total Central Government Expenditure in the Health Sector, by Program

Education Sector Data

Primary Education

- E.1 Primary Enrollments and Enrollment Ratios, by Gender and District
- E.1a Primary School Enrollments, Enrollment Ratios, by District
- E.2 Primary Enrollments by Grade, Gender, and District
- E.3 Primary School Teachers by Grade, Gender, and Student/Teacher Ratio by District
- E.4 Primary Student/Teacher Ratios & Student/Trained Teacher Ratios by District
- E.5 Condition of Primary School Buildings, by District
- E.6 Central Government Expenditure on Primary Education & Unit Cost, by District
- E.7 Primary School Curriculum, by Subject and Grade

Secondary Education

- E.8 Secondary Enrollments and Enrollment Ratios, by Gender and District
- E.9 Secondary Enrollment by Grade, Gender, and District
- E.10 Secondary School Teachers by Grade, Gender, and Student/Teacher Ratio, by District
- E.11 Ministry of Education Payroll, 1991/92
- E.12 Secondary School Curriculum, by Subject and Grade
- E.13 Projects in the Five Year Investment Program

Health Sector Data

- H.1 Major Causes of Outpatient Morbidity, 1988-90
- H.2 Major Causes of Inpatient Mortality, 1988-90
- H.3 Distribution of Health Facilities, 1991
- H.3a Distribution of Government Facilities, 1991
- H.3b Distribution of Non-Government Organization Facilities
- H.3c Distribution of Private Facilities
- H.4 Distribution of Hospital Beds, 1991
- H.5 Distribution of Ministry of Health Personnel, 1991
- H.6 Tabulations from the Family Household Budget Survey, 1989/90
- H.7 Tabulation from the Demographic and Health Survey, 1988/89
- H.8 Estimated Recurrent Expenditures for Health from All Sources, 1989/90
- H.9 Rough estimates of distribution of Spending by Health Problem, 1989/90
- H.10 MOH Proposed Fees Compared to Fees at a Kampala NGO Hospital

Distributors of World Bank Publications

ARGENTINA
Carlos Hirsch, SRL
Galeria Guemes
Florida 165, 4th Floor-Ofc. 453/465
1333 Buenos Aires

AUSTRALIA, PAPUA NEW GUINEA, FIJI, SOLOMON ISLANDS, VANUATU, AND WESTERN SAMOA
D.A. Information Services
648 Whitehorse Road
Mitcham 3132
Victoria

AUSTRIA
Gerold and Co.
Graben 31
A-1011 Wien

BANGLADESH
Micro Industries Development Assistance Society (MIDAS)
House 5, Road 16
Dhanmondi R/Area
Dhaka 1209

Branch offices:
Pine View, 1st Floor
100 Agrabad Commercial Area
Chittagong 4100

76, K.D.A. Avenue
Kulna 9100

BELGIUM
Jean De Lannoy
Av. du Roi 202
1060 Brussels

CANADA
Le Diffuseur
C.P. 85, 1501B rue Ampère
Boucherville, Québec
J4B 5E6

CHILE
Invertec IGT S.A.
Av. Santa María 6400
Edificio INTEC, Of. 201
Santiago

CHINA
China Financial & Economic Publishing House
8, Da Fo Si Dong Jie
Beijing

COLOMBIA
Infoenlace Ltda.
Apartado Aereo 34270
Bogota D.E.

COTE D'IVOIRE
Centre d'Edition et de Diffusion Africaines (CEDA)
04 B.P. 541
Abidjan 04 Plateau

CYPRUS
Center of Applied Research
Cyprus College
6, Diogenes Street, Engomi
P.O. Box 2006
Nicosia

DENMARK
SamfundsLitteratur
Rosenoerns Allé 11
DK-1970 Frederiksberg C

DOMINICAN REPUBLIC
Editora Taller, C. por A.
Restauración e Isabel la Católica 309
Apartado de Correos 2190 Z-1
Santo Domingo

EGYPT, ARAB REPUBLIC OF
Al Ahram
Al Galaa Street
Cairo

The Middle East Observer
41, Sherif Street
Cairo

FINLAND
Akateeminen Kirjakauppa
P.O. Box 128
SF-00101 Helsinki 10

FRANCE
World Bank Publications
66, avenue d'Iéna
75116 Paris

GERMANY
UNO-Verlag
Poppelsdorfer Allee 55
D-5300 Bonn 1

HONG KONG, MACAO
Asia 2000 Ltd.
46-48 Wyndham Street
Winning Centre
2nd Floor
Central Hong Kong

INDIA
Allied Publishers Private Ltd.
751 Mount Road
Madras - 600 002

Branch offices:
15 J.N. Heredia Marg
Ballard Estate
Bombay - 400 038

13/14 Asaf Ali Road
New Delhi - 110 002

17 Chittaranjan Avenue
Calcutta - 700 072

Jayadeva Hostel Building
5th Main Road, Gandhinagar
Bangalore - 560 009

3-5-1129 Kachiguda
Cross Road
Hyderabad - 500 027

Prarthana Flats, 2nd Floor
Near Thakore Baug, Navrangpura
Ahmedabad - 380 009

Patiala House
16-A Ashok Marg
Lucknow - 226 001

Central Bazaar Road
60 Bajaj Nagar
Nagpur 440 010

INDONESIA
Pt. Indira Limited
Jalan Borobudur 20
P.O. Box 181
Jakarta 10320

IRELAND
Government Supplies Agency
4-5 Harcourt Road
Dublin 2

ISRAEL
Yozmot Literature Ltd.
P.O. Box 56055
Tel Aviv 61560

ITALY
Licosa Commissionaria Sansoni SPA
Via Duca Di Calabria, 1/1
Casella Postale 552
50125 Firenze

JAPAN
Eastern Book Service
Hongo 3-Chome, Bunkyo-ku 113
Tokyo

KENYA
Africa Book Service (E.A.) Ltd.
Quaran House, Mfangano Street
P.O. Box 45245
Nairobi

KOREA, REPUBLIC OF
Pan Korea Book Corporation
P.O. Box 101, Kwangwhamun
Seoul

MALAYSIA
University of Malaya Cooperative Bookshop, Limited
P.O. Box 1127, Jalan Pantai Baru
59700 Kuala Lumpur

MEXICO
INFOTEC
Apartado Postal 22-860
14060 Tlalpan, Mexico D.F.

NETHERLANDS
De Lindeboom/InOr-Publikaties
P.O. Box 202
7480 AE Haaksbergen

NEW ZEALAND
EBSCO NZ Ltd.
Private Mail Bag 99914
New Market
Auckland

NIGERIA
University Press Limited
Three Crowns Building Jericho
Private Mail Bag 5095
Ibadan

NORWAY
Narvesen Information Center
Book Department
P.O. Box 6125 Etterstad
N-0602 Oslo 6

PAKISTAN
Mirza Book Agency
65, Shahrah-e-Quaid-e-Azam
P.O. Box No. 729
Lahore 54000

PERU
Editorial Desarrollo SA
Apartado 3824
Lima 1

PHILIPPINES
International Book Center
Suite 1703, Cityland 10
Condominium Tower 1
Ayala Avenue, H.V. dela Costa Extension
Makati, Metro Manila

POLAND
International Publishing Service
Ul. Piekna 31/37
00-677 Warszawa

For subscription orders:
IPS Journals
Ul. Okrezna 3
02-916 Warszawa

PORTUGAL
Livraria Portugal
Rua Do Carmo 70-74
1200 Lisbon

SAUDI ARABIA, QATAR
Jarir Book Store
P.O. Box 3196
Riyadh 11471

SINGAPORE, TAIWAN, MYANMAR, BRUNEI
Information Publications Private, Ltd.
Golden Wheel Building
41, Kallang Pudding, #04-03
Singapore 1334

SOUTH AFRICA, BOTSWANA
For single titles:
Oxford University Press Southern Africa
P.O. Box 1141
Cape Town 8000

For subscription orders:
International Subscription Service
P.O. Box 41095
Craighall
Johannesburg 2024

SPAIN
Mundi-Prensa Libros, S.A.
Castello 37
28001 Madrid

Libreria Internacional AEDOS
Consell de Cent, 391
08009 Barcelona

SRI LANKA AND THE MALDIVES
Lake House Bookshop
P.O. Box 244
100, Sir Chittampalam A. Gardiner Mawatha
Colombo 2

SWEDEN
For single titles:
Fritzes Fackbokaforetaget
Regeringsgatan 12, Box 16356
S-103 27 Stockholm

For subscription orders:
Wennergren-Williams AB
P. O. Box 1305
S-171 25 Solna

SWITZERLAND
For single titles:
Librairie Payot
Case postale 3212
CH 1002 Lausanne

For subscription orders:
Librairie Payot
Service des Abonnements
Case postale 3312
CH 1002 Lausanne

THAILAND
Central Department Store
306 Silom Road
Bangkok

TRINIDAD & TOBAGO, ANTIGUA BARBUDA, BARBADOS, DOMINICA, GRENADA, GUYANA, JAMAICA, MONTSERRAT, ST. KITTS & NEVIS, ST. LUCIA, ST. VINCENT & GRENADINES
Systematics Studies Unit
#9 Watts Street
Curepe
Trinidad, West Indies

TURKEY
Infotel
Narlabahçe Sok. No. 15
Cagaloglu
Istanbul

UNITED KINGDOM
Microinfo Ltd.
P.O. Box 3
Alton, Hampshire GU34 2PG
England

VENEZUELA
Libreria del Este
Aptdo. 60.337
Caracas 1060-A

BEST COPY AVAILABLE

The World Bank

Headquarters
1818 H Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: **(202) 477-1234**
Facsimile: **(202) 477-6391**
Telex: WUI **64145** WORLDBANK
RCA **248423** WORLDBK
Cable Address: **INTBAFRAD**
WASHINGTONDC

European Office
66, avenue d'Iéna
75116 Paris, France

Telephone: (1) 40.69.30.00
Facsimile: (1) 40.69.30.66
Telex: 640651

Tokyo Office
Kokusai Building
1-1 Marunouchi 3-chome
Chiyoda-ku, Tokyo 100, Japan

Telephone: (3) 3214-5001
Facsimile: (3) 3214-3657
Telex: 26838

ISBN 0-8213-2713-5

237 BEST COPY AVAILABLE